

Service Manual

General Description

Adjustment Procedures

Block / Schematic Diagrams

Exploded Views / Parts List

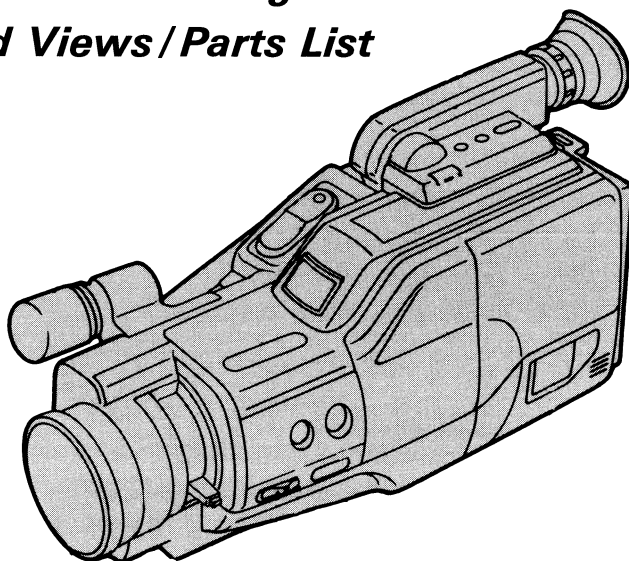
VHS-C Movie

Panasonic **VHS-C**

NTSC

HQ

NV-M400PX



SPECIFICATIONS

ITEM	SPECIFICATION	ITEM	SPECIFICATION
POWER	Source: BATTERY; DC 9.6 V Consumption; Camera search mode; 8.7 W (Battery operation)	VIDEO	HEADS: 8 rotary heads, 1 fling erase head
			OUTPUT (PHONO Type): 1.0 V _{p-p} 75Ω unbalanced
VIDEO RECORDING SYSTEM	8 rotary heads, helical scanning system NTSC	AUDIO	HEAD: 1 Stationary head
TAPE FORMAT	VHS-C Cassette Tape (Tape width 12.7 mm)		OUTPUT (PHONO Type): -8 dB 600Ω unbalanced
TAPE SPEED	SP mode: 33.35 mm/s SLP mode: 11.12 mm/s Record/Playback Time SP mode: 20 min. with NV-TC20SG SLP mode: 60 min. with NV-TC20SG FF/REW Time less than 3 min. with NV-TC20SG	WEIGHT	Approx. 1.3 kg (without Battery Pack)
		DIMENSIONS	124(W) × 139.3(H) × 328(D) mm (with View Finder turned down)
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)	ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. RF Adaptor 1 pc. VHS-C Cassette Adaptor 1 pc. VHS-C Cassette Tape 1 pc. System Carrying Case 1 pc. Shoulder Strap 1 pc. DC Input Cable 1 pc. RF Cable 1 pc. AV Output Cable 1 pc. Power Plug Adaptor
	STANDARD ILLUMINATION: 1,400 lux		
	MINIMUM REQUIRED ILLUMINATION: 15 lux		
	LENS: Built-in 6 : 1, Power Zoom Lens with MACRO Function, Auto Iris, Auto Focus System, F1.2 (9 ~ 54 mm), Lens Front Diameter/φ49 mm		
	VIEW FINDER: 2/3" Electric View Finder		

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

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INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.

Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.

Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.

In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.

Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...

Section 4 contains exploded views and parts list.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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Technical Information

Service Caution

1. Servicing the VTR Section

When servicing the VTR section, connection of the extension cables and Y/C separator are necessary as shown in Fig. S1, S2.

Servicing Fixtures (VTR Section)

PART NO.	PART NAME	PCS	CONNECTION
VFK0607	Extension Cable (26P)	1	P2001~P2601
VFKS0067	Extension Cable (20P)	1	P5001~P3501
VFKS0060	Extension Cable (2P)	1	P6009~LOADING MOTOR
VFK0524	Extension Cable (3P)	1	P6005~MODE SELECT SW
VFKS0047	Y/C Separator	1	—
VFK0430	Extension Cable (14P)	1	P3502~VFKS0074
VFKS0074	Connector	1	Y/C Separator~VFK0430

Fig. S1

Connection Method of Extension Cables

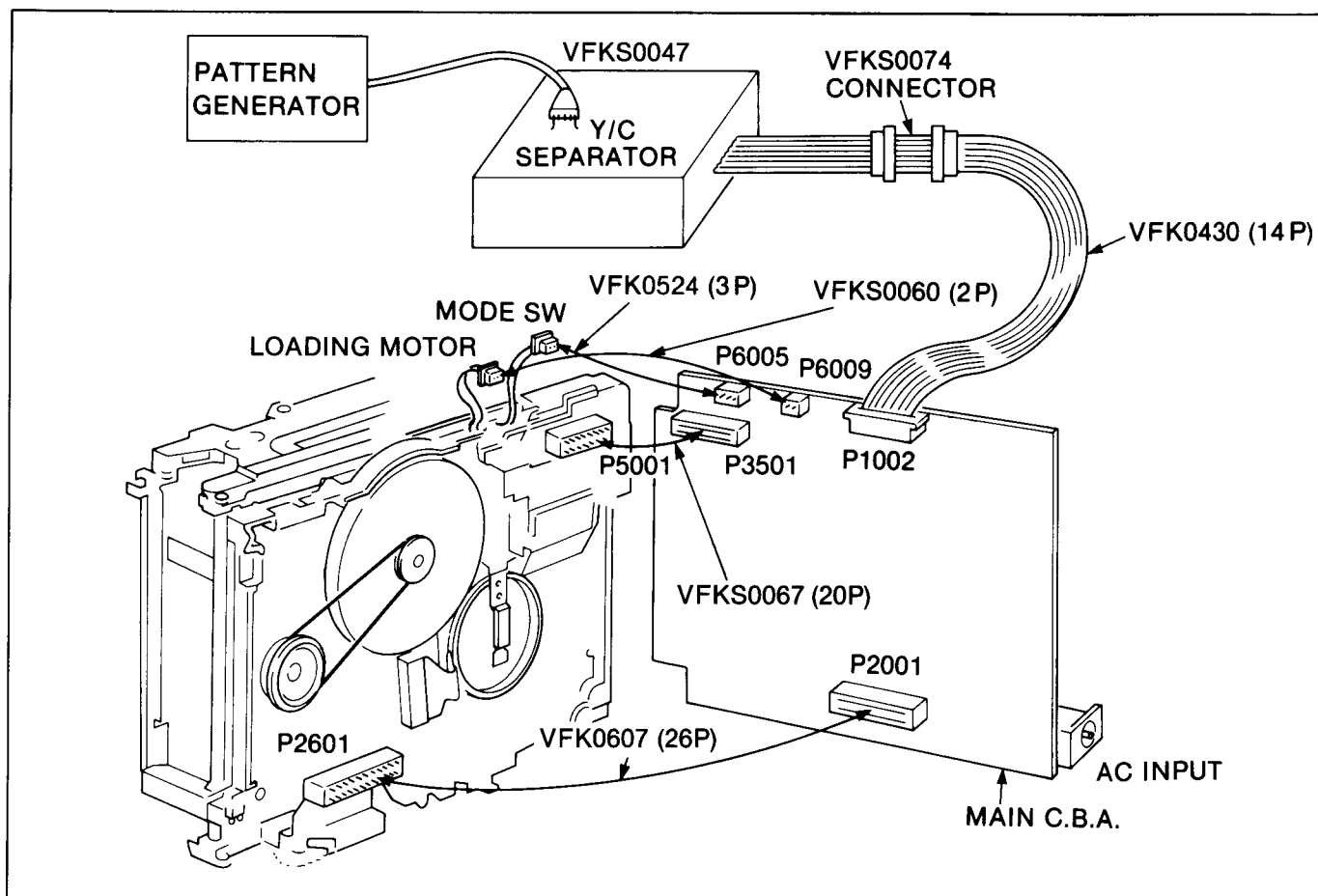


Fig. S2

2. Servicing the Camera Section

When servicing the camera section connection of extension cables and Diffusion Plate are necessary as shown in Fig. S3, S4.

Servicing Fixture (Camera Section)

PART NO.	PART NAME	PCS	CONNECTION
VFKS0051	Extension Cable (3P)	1	P704~ACTUATOR UNIT
VFKS0052	Extension Cable (6P)	1	P701~FOCUS & ZOOM SENSOR
VFK0503	Extension Cable (5P)	1	FP302~FP601
VFK0380	Extension Cable (18P)	1	B301~B201
VFK0497	Extension Cable (6P)	1	P703~FOCUS MOTOR & IRIS MOTOR
VKW1049	Diffusion Plate	1	—

Fig. S3

Connection Method of Extension Cables

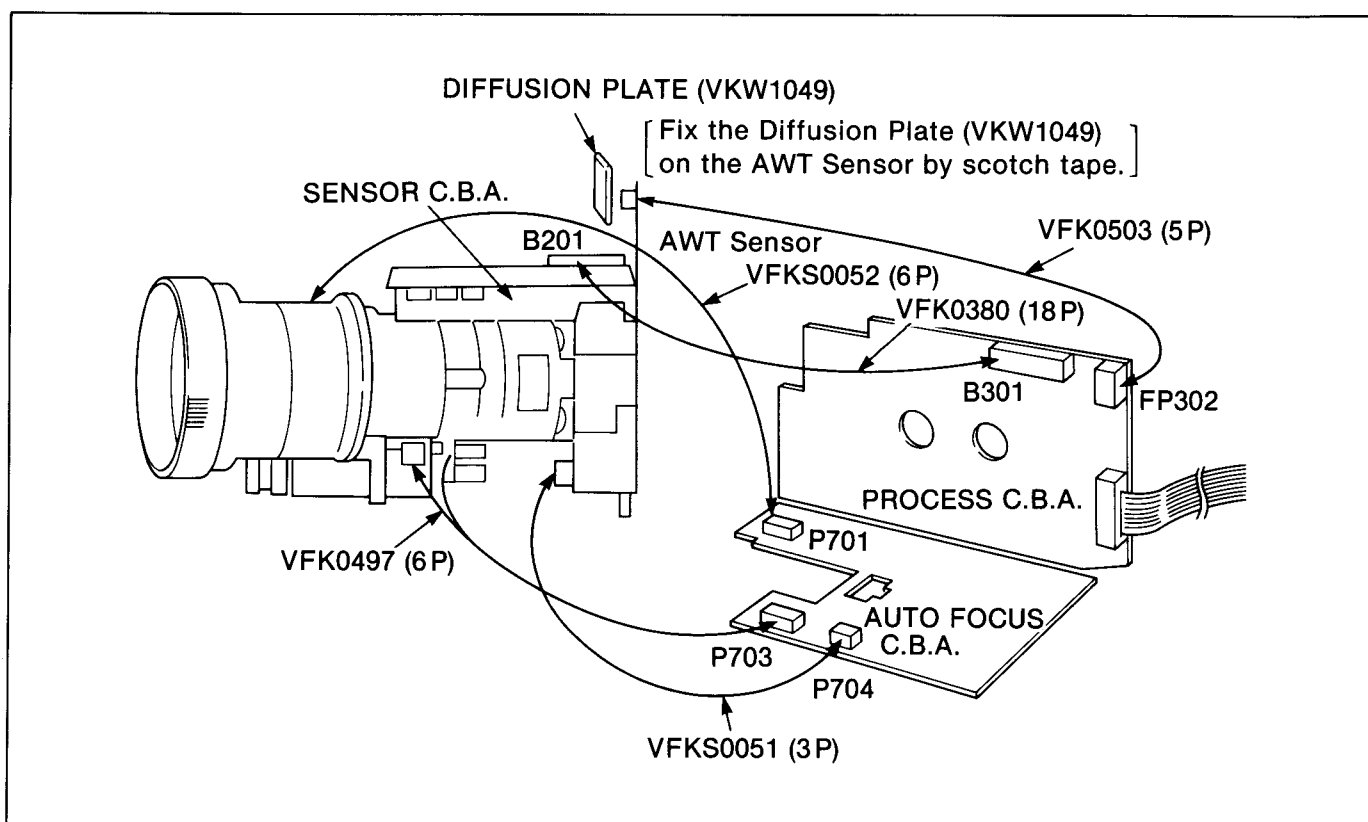


Fig. S4

3. How To Use Camera Holder Arm (VFK0431)

This Camera Holder Arm which is adjustable the span must be mounted to VFK0382 (Camera Holder of NV-M5) and it can be used with VFK0432 for camera adjustments or checking.

- (A) --- VFK0432 Holder Spacer (2pcs.)
- (B) --- VFK0431 Camera Holder Arm
- (C) --- XSN26+18 Screw (2pcs.)
- (D) --- VFK0382 Camera Holder

1. Fix the Holder Arm (4) and (5) temporarily by screw (1) as shown in Fig.S5.
2. Mount the Camera Holder Arm (B) to the Camera Holder (D) by screws (2) and (3) as shown in Fig. S6.
3. Tightn the screws (C) with the Holder Spacers (A) as shown in Fig. S5.

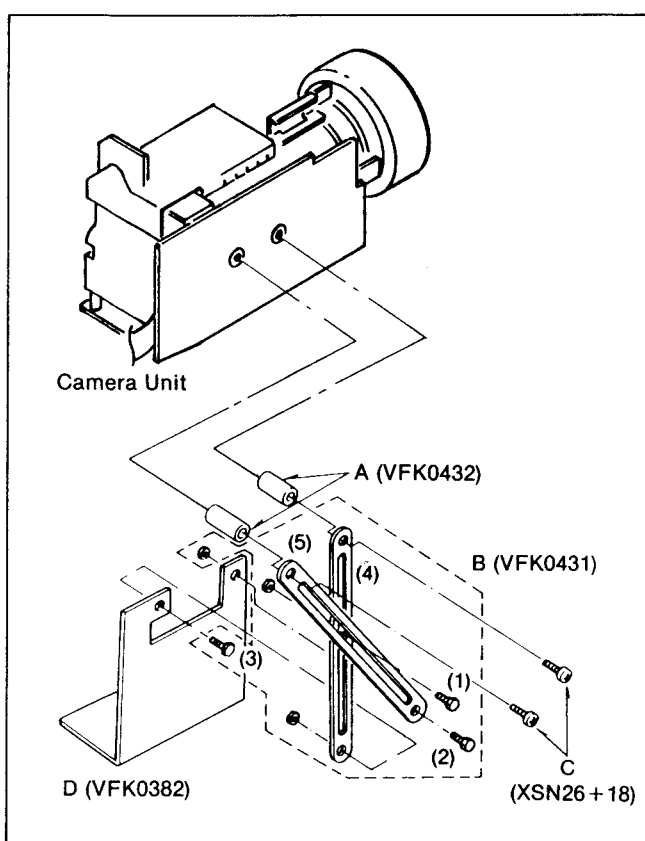


Fig. S5

4. How To Connect the Y/C Separator and Y/C Separator Connection Cable

When the Y/C Separator Connection Cable (VFKS0074) is used to connect to Y/C Separator the caution should be paid the following items:

*Cut off the marked portion of Y/C Separator output connector as shown in Fig.S7

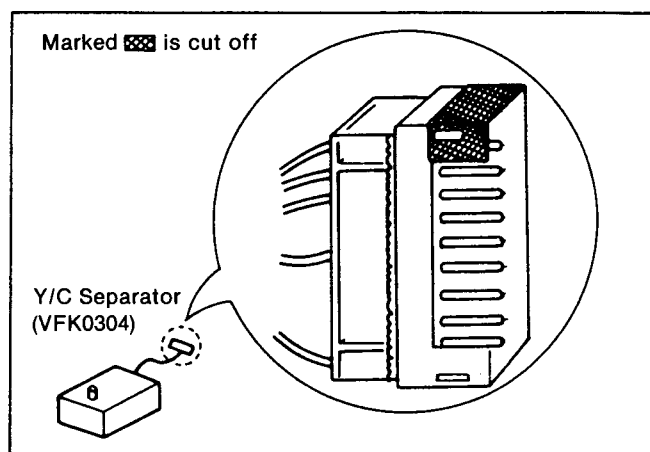


Fig. S7

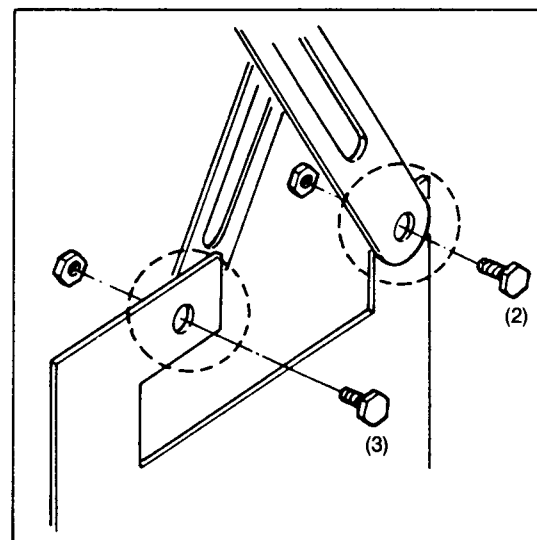


Fig. S6

5. Set Tracking Control to the Fixed position

If the Tracking Control is required to be in the fixed (neutral) position, push both of the tracking Control Up/Down Switchs, on the Main C.B.A., in at the same time in Playback Mode.

6. Manual Eject—Tape in and Carriage closed

1. Remove Cassette Cover by removing 2 Screws.
2. Push on upper end of Lock Lever to release cassette carriage.

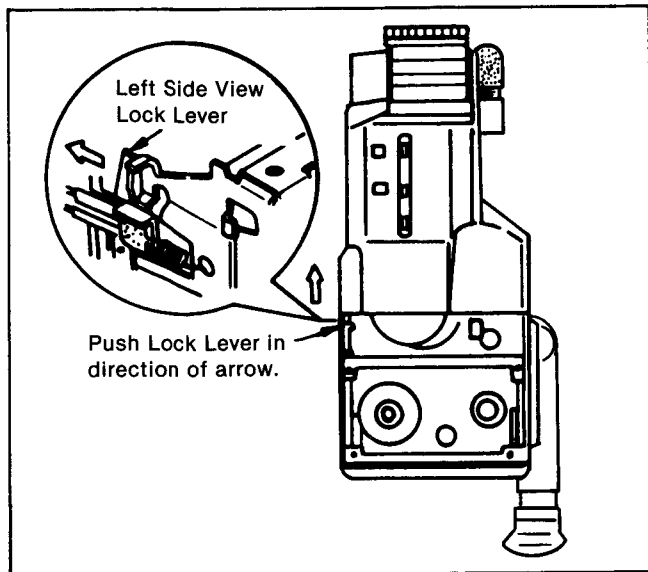


Fig. S8

7. Elimination of Tape slack

Before inserting the Cassette Tape in the VHS-C Movie, take up slack in the tape by turning the Takeup Tape Gear on the side of the Cassette Tape. Turn it in the direction of the arrow until no slack is evident and opposite reel begins to turn.

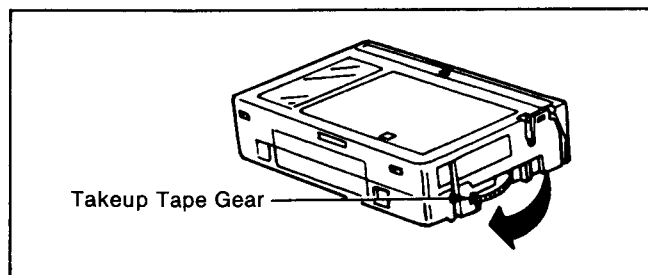


Fig. S9

8. Insertion (or Removal) of cassette Tape

As in Fig. 5, hold the tape vertically with fingers and thumb to insert or remove the tape. (Be sure to eliminate slack before inserting the tape.)

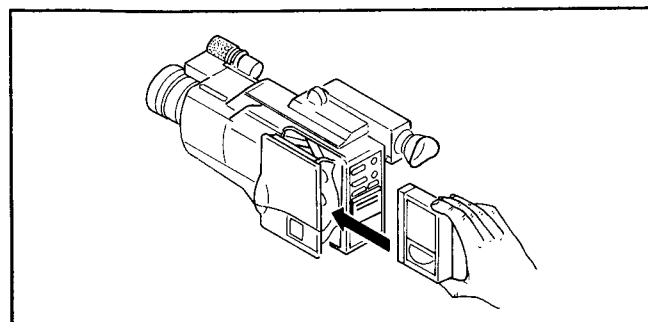


Fig. S10

9. Connection of the Flexible Cables to Trap Connectors

a. Removal

1. On the trap Connector, pull out on both ends of the Locking Tab Surrounding the cable end to release the Trap on the Connector. Then pull Flexible Cable out to remove as shown in Fig. 6.

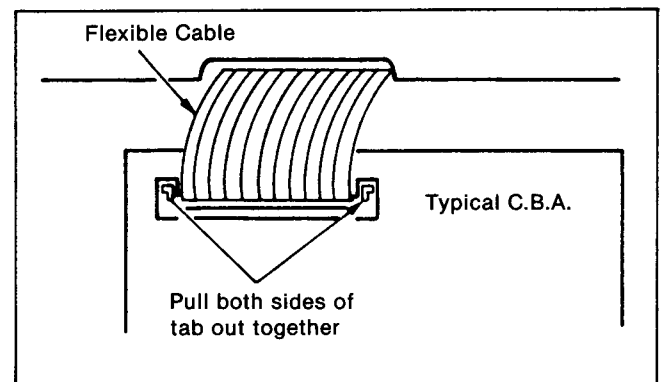


Fig. S11

b. Installation

1. Insert the end of the Flexible Cable into the Trap Connector so it lays smoothly across the slot.
2. Press the middle of the cable firmly against the Trap Connector slot, and hold it securely.
3. Without pinching the Cable, press the Locking Tabs in against the Trap Connector until both ends snap into their locked positions.
4. Pull lightly on the Cable to check for positive connection.

Note:

1. Take care when removing or installing the Flexible Cable to prevent Cable damage.

10. Service of Operation Bracket Unit

When removing and reinstalling the Operation Bracket Unit and Switch Cover, first, install the Switch Cover over the Operation Key portion (CAMERA MODE) of the Operation Bracket Unit, and then install assembly parts.

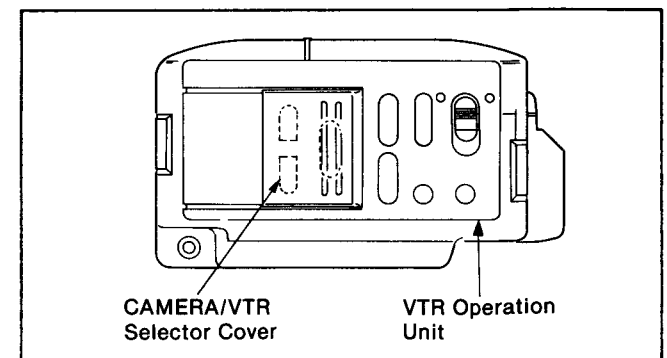


Fig. S12

SERVICE INFORMATION

1-1. HOW TO CHECK THE CRACKED CHIP PART

- (1) Apply heat to the soldered portions of chip part using a soldering iron for about 2-3 seconds.
- (2) If the chip part is faulty, it will be broken or cracked.

Caution: Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

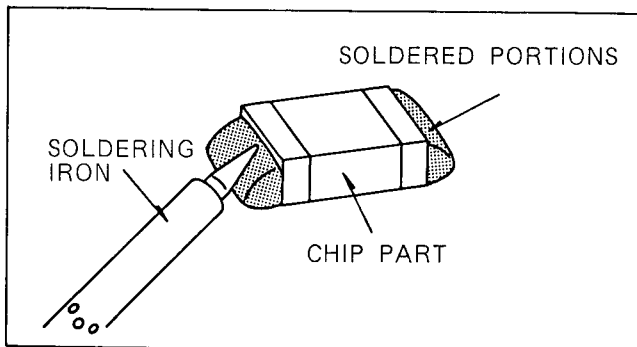


FIG. G1

Note: Regarding intermittent faults
The main causes of these faults are poor soldering and cracked chip parts.

1-2. HOW TO REPLACE THE CHIP PART

1) REMOVAL (RESISTOR, CAPACITOR, etc...)

- (1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.
- (2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

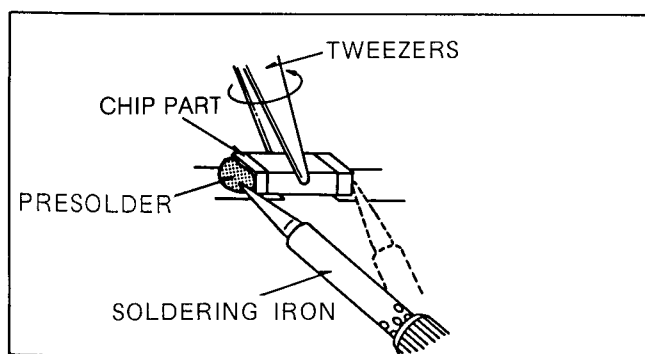


FIG. G2

2) REMOVAL (transistor, diode, etc...)

- (1) Grasp the chip part with tweezers and melt the solder of one lead.

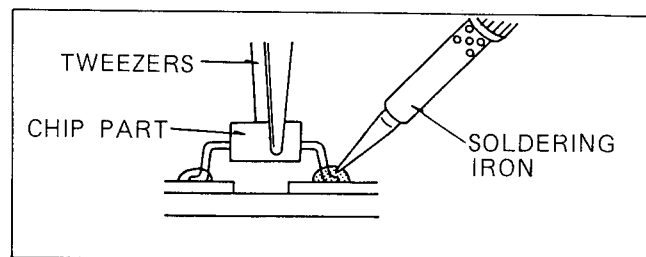


FIG. G3

- (2) Lift the side of that lead upward.

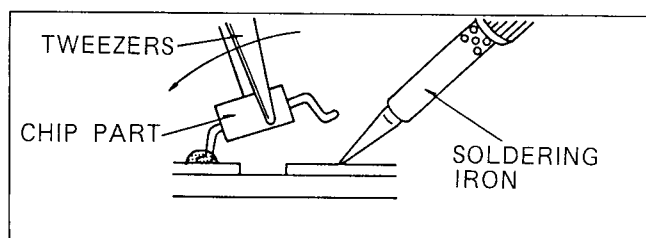


FIG. G4

Caution: Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

- (3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

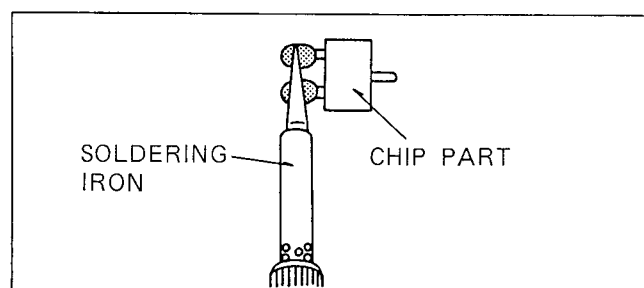


FIG. G5

3) INSTALLATION

- (1) Presolder the one side of contact point on the circuit board.

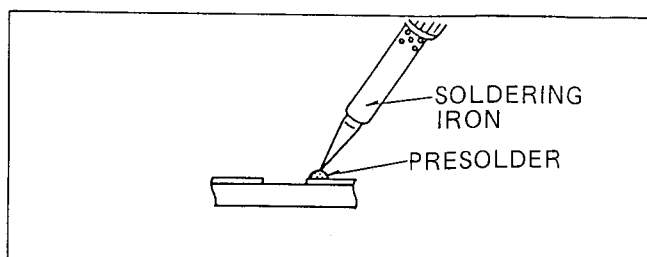


FIG. G6

- (2) To install the chip part, hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
- (3) Solder the other side of the chip part.
- (4) Check your soldering.

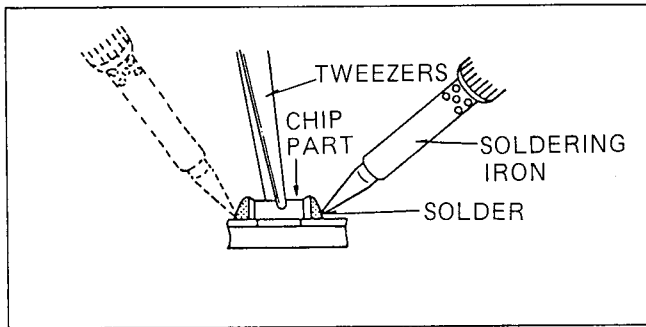


FIG. G7

1-3. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

(FOR EXAMPLE)

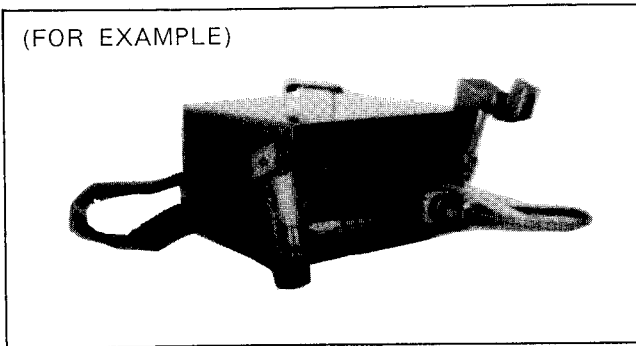


FIG. G8

- (1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5 ~ 8 seconds.
- (2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution: Do not supply the hot air to the chip parts around the Flat-IC for long time as damage may occur to the chip parts around the Flat-IC.

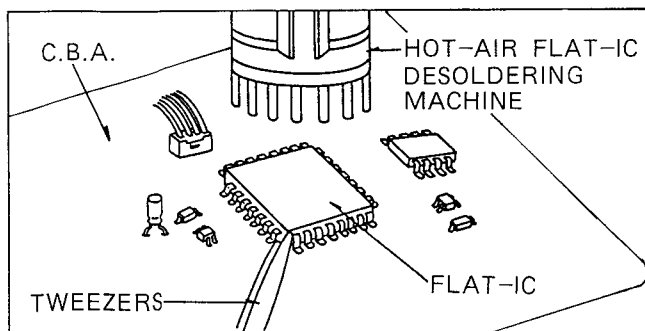


FIG. G9

(WITH SOLDERING IRON)

- (1) Using solder braid remove the solder from all pins of the Flat-IC. When you use the solder flux which is applied to all pins of the Flat-IC, you can remove it easily.

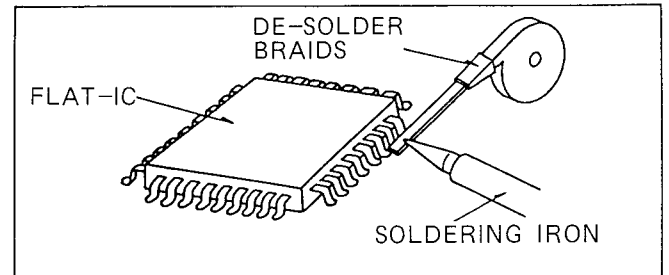


FIG. G10

- (2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire (iron wire), while heating the pins using a fine tip soldering iron or a hot air blower.

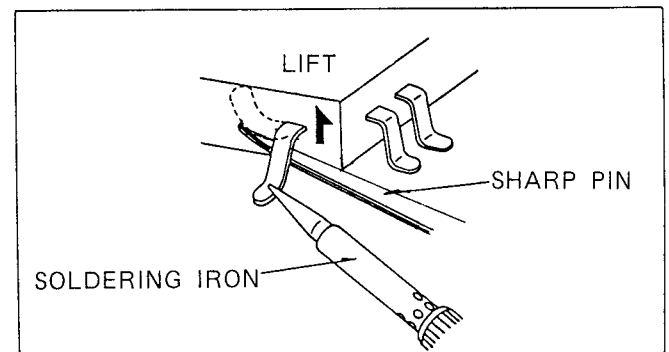


FIG. G11

(WITH IRON WIRE)

- (1) Affix the wire to workbench or solid mounting point as shown in FIG. G12.
- (2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad, while heating the pins using a fine tip soldering iron or hot air blower.

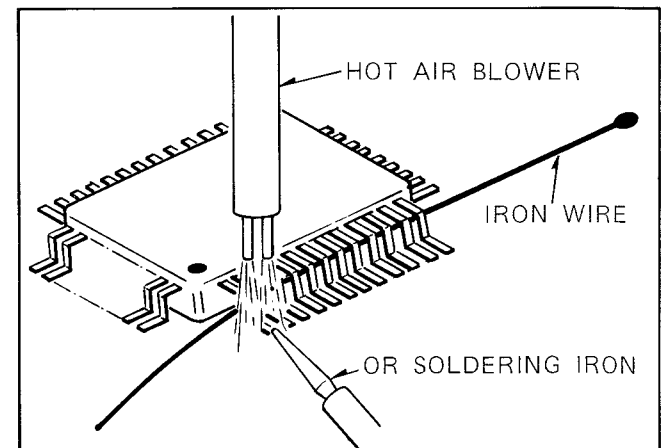


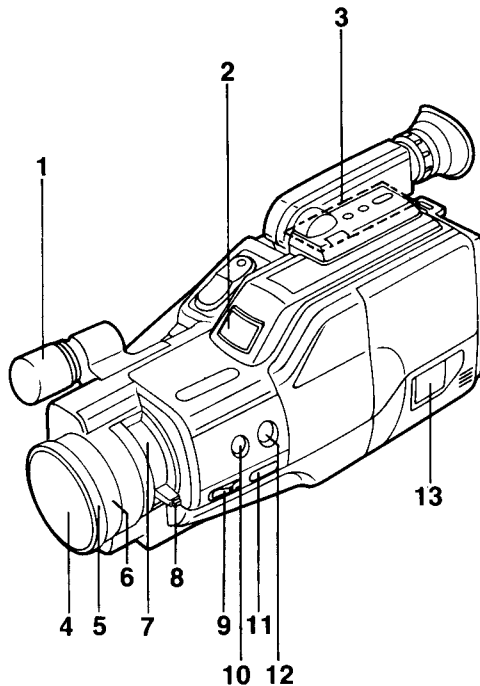
FIG. G12

Note: When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

SECTION 1

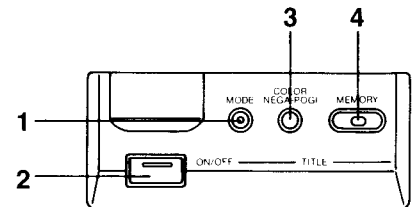
GENERAL DESCRIPTION

1-1. CONTROLS AND COMPONENTS

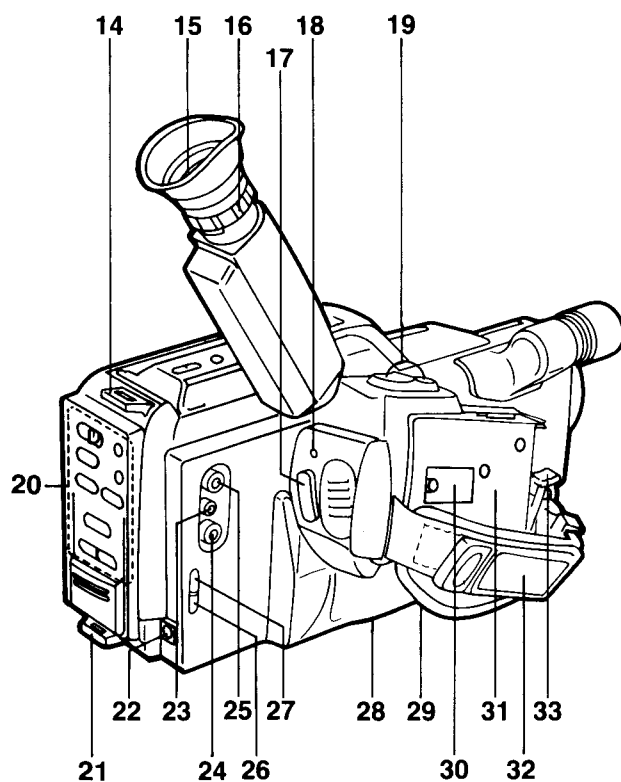


- 1 Built-in Microphone
- 2 White Balance Sensor Window
- 3 Top Panel Controls

Top Panel Controls

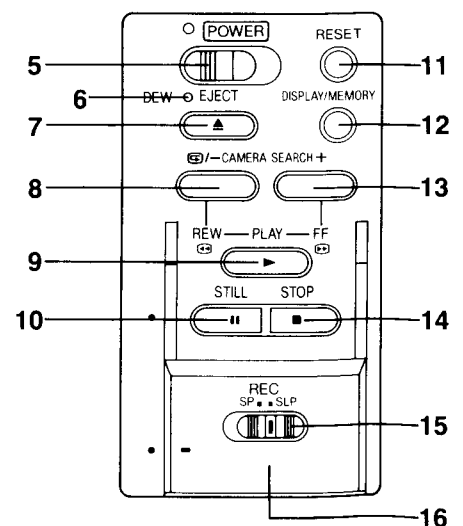


- 1 Titling Mode Selector Button
- 2 Title Function On/Off Button
- 3 Title Color/Color Nega-Pogi Selector Button
- 4 Memory Button



- 4 Lens Cap
- 5 Lens Hood
- 6 Focus Ring
- 7 Zoom Ring
- 8 Manual Zoom Lever with Macro Button
- 9 Focus Mode Selector
- 10 Fade Button
- 11 Date/Time Selector
- 12 High Speed Shutter Button
- 13 Cassette Compartment
- 14 Shoulder Strap Holder
- 15 Electronic Viewfinder
- 16 Eyepiece Corrector Control
- 17 Recording Start/Stop Button
- 18 Tally Indicator
- 19 Power Zoom Control Buttons
- 20 General Operation Control

General Operation Controls



- 5 Power On/Off Switch
- 6 Dew Indicator
- 7 Eject Button
- 8 Rewind/Review Button
- 9 Play Button
- 10 Still Button
- 11 Reset Button
- 12 Display Memory Button
- 13 Fast Forward/Cue Button
- 14 Stop Button
- 15 Recording Speed Selector
- 16 Camera/VCR Selector Cover

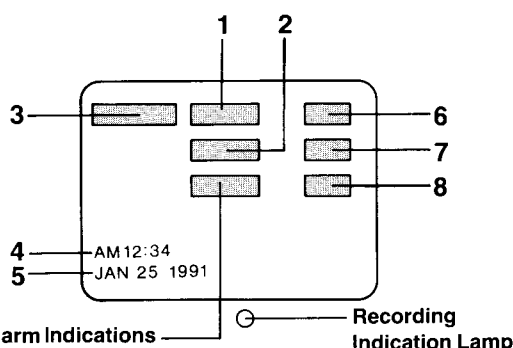
Function of the Camera/VCR Selector Cover

Closed For camera recording.
 Open (as illustrated) For other operations than camera recording.

- 21 Shoulder Strap Holder
- 22 DC Input Socket
- 23 RF DC Output Socket
- 24 Audio Output Socket
- 25 Video Output Socket
- 26 Mode Shift Button
- 27 Mode Set Button
- 28 Battery Compartment for Auto Date/Time
- 29 Tripod Mount
- 30 Battery Compartment for Title Function
- 31 Battery Holder
- 32 Grip Belt
- 33 Battery Locking Lever

1-2. ELECTRICAL VIEWFINDER

The following indications are displayed in the Electronic Viewfinder (EVF) to inform you of the conditions of the Movie Camera.



Warning/Alarm Indications



There is little battery power left. Movie Camera will be turned off in a few minutes. Replace the battery pack by a fully recharged one.



It is impossible to record because the erasure prevention tab of the cassette is not intact.

END

During recording, the tape has almost reached its end. Replace the tape with a new one. The indication will remain lit when the tape has reached its end.



When condensation has formed inside the Movie Camera, the "DEW" indication will flash and a few seconds later, the unit itself off.



Video Head Clogging



When the Battery for Title Function is not inserted, the indication will flash for 10 seconds after the Movie Camera is turned on.

1 Remaining Battery Power Indication

E---F The "—" indications begin to disappear from right to left as the power of the Battery Pack weakens.

2 Counter Indication

M0501 Tape Counter
 1:23 Lap Time Counter

3 Digital Memory Indication

WHT Color Indication
 WIPE ↑ Mode Indication (No indication in normal mode.)

4 Time Indication

5 Date Indication

6 Tape Running Indications

REC Recording mode
 PAUSE Recording Pause mode, Rec Review
 ▷ Play mode, Camera Search (In forward direction)
 II Still mode
 ▷▷ Fast Forward/Cue mode
 << Rewind/Review mode, Camera Search (In reverse direction)

7 Recording Mode Indications

SP SP mode
 SLP SLP mode

8 High Speed Shutter Mode Indications

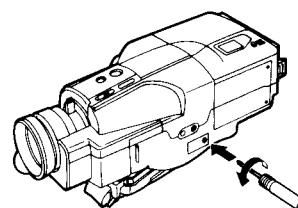
1/500 1/500 sec.
 1/1000 1/1000 sec.

•Some of the above indications may light up alternately at the same place in the EVF to indicate the corresponding operating condition or warnings.

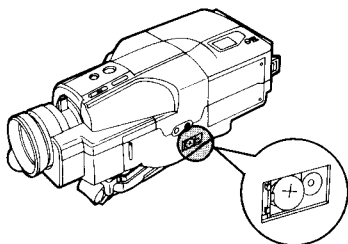
1-3. SETTING OF THE DATE AND CLOCK & RECORDING THE DATE/CLOCK INDICATIONS

How to Insert the Battery for the Clock Operation

- 1 Remove the lid.



- 2 Insert the "LR1130" size battery with polarities (+ and -) aligned correctly and then replace the lid.



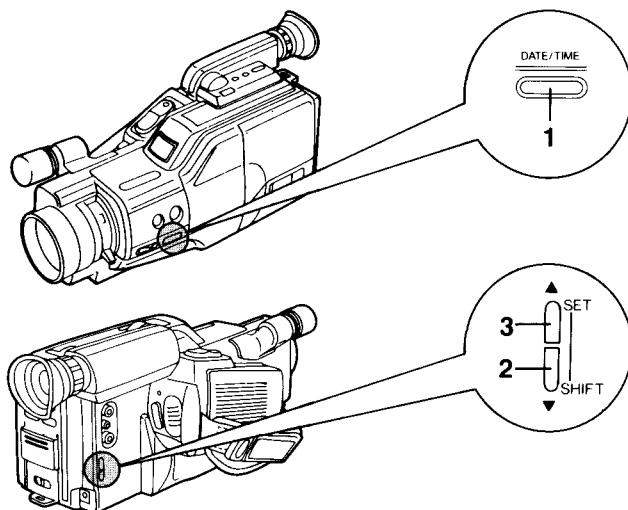
Note:

- This battery is necessary for the Date/Time Mode to be memorized by the Movie Camera.
- If the battery is not inserted or if it is exhausted, the indication "PLEASE SET BATTERY" will appear.
- When replacing the battery while the Date/Time indications are still correct, connect the Movie Camera to the AC Adaptor for the duration of the battery replacement so that the time will remain unchanged.

CAUTION FOR BATTERY REPLACEMENT

- The life of the battery is about one year. Inspect and if necessary, replace the Battery once a year.
- Load the new battery with its polarities (+ and -) aligned correctly.
- Remove spent battery immediately and dispose of it.
- Do not try to short-circuit, recharge or heat the battery and do not throw it into a fire.

Setting of the Date and Clock



- 1 When the Date/Time Selector Button is pushed, the indication shown on the right will appear in the EVF.
 - If no battery is inserted, the indication "PLEASE SET BATTERY" in the EVE will light up.

AM 12:00
JAN 1 1990

- 2 When the Shift Button is kept pressed for more than about 2 seconds, the "Year" portion will start to flash. Then, at every press of the shift Button, the items to be set will flash in the following sequence.

Year→Month→Date→Hour→Minute→Year→...

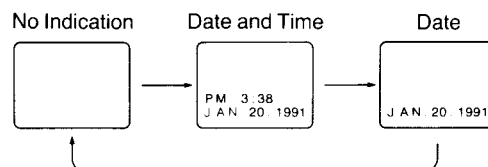
- 3 When the Set Button is pushed, the flashing portion displayed will be changed in the following sequence.

YEAR: 1990→1991→...→2089→1990→...
 MONTH: JAN→FEB→...→DEC→JAN→...
 DATE: 1→2→...→31→1→...
 HOUR: AM12→AM1→...→PM11→AM12→...
 MINUTE: 00→01→...→59→00→...

- Repeat procedures 2 and 3 until all items have been set.
- Once the time and date are set, press the Shift Button in response to a precise time signal so that the clock may begin to function.

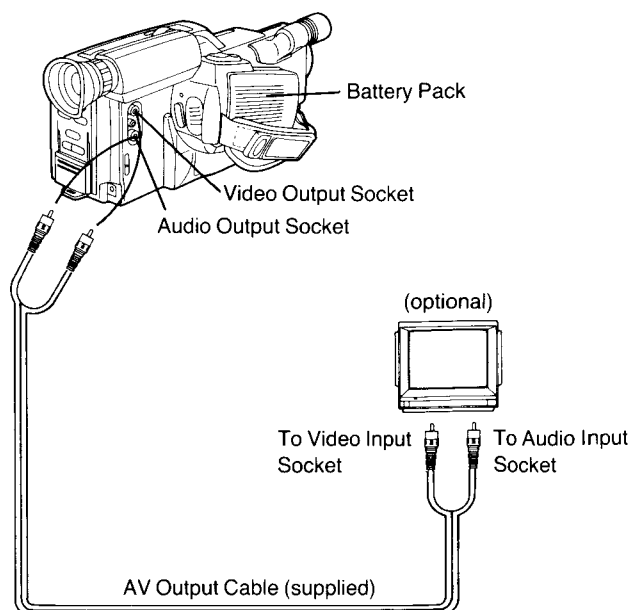
Recording the Date/Time Indications

When the Date/Time Selector is pushed repeatedly, the indications will change in the following sequence:

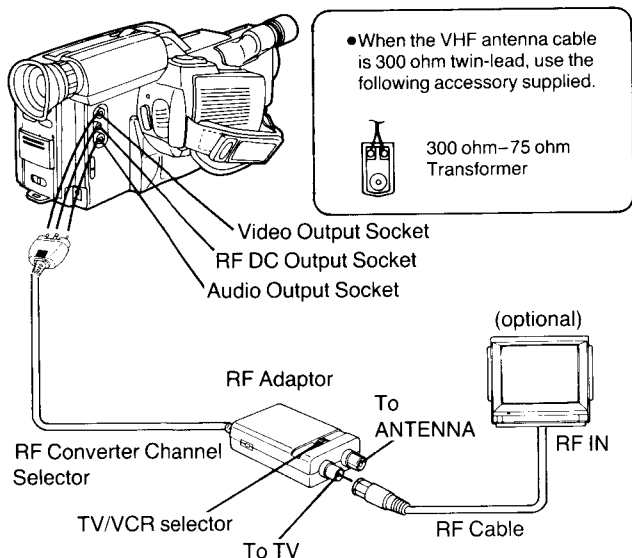


1-4. CABLE CONNECTION

TV Set with AV Socket



TV Set without AV Socket



TV

Tune to VHF channel 3 or 4.

TV/VCR Selector on the RF Adaptor

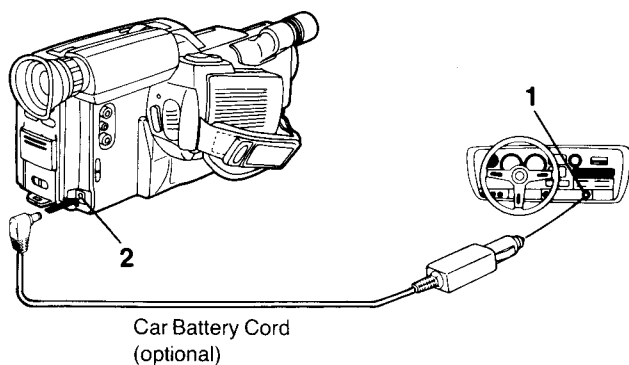
VCR: For playing back a cassette

TV: For watching TV.

RF Converter Channel Selector

Set to channel 3 or 4, whichever is not used in your area.

Car Battery Cord



- 1 Start the engine and insert the Car Battery Cord into the cigarette lighter socket.
- 2 Connect the other end to the DC Input Socket on the Movie Camera.

Note:

- The Car Battery Cord can only be used with 12 V DC negative-grounded vehicles.
- Do not start the car engine while the Movie Camera is powered by the car battery.

1-5. VHS-C MOVIES SYSTEM ACCESSORIES

Standard Accessories

AC Adaptor
Battery Pack
RF Adaptor
Shoulder Strap
System Carrying Case
VHS-C Video Cassette
Cassette Adaptor
AV Output Cable
RF Cable
Battery for Clock Operation
DC Input Cable
Battery for Cassette Adaptor Operation
Battery for Title Function
Power Plug Adaptor (VJP1005)

Optional Accessory

Car Battery Cord (VW-ACC5)

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M ohm and 5.2M ohm. When the exposed metal does not have a return path to the chassis, the reading must be

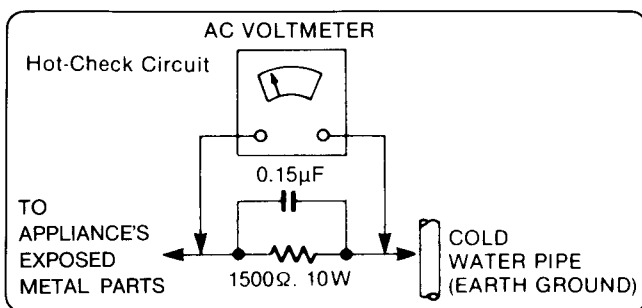


Figure 1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k ohm, 10 watts resistor, in parallel with a 0.15μF capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE(ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip"

components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING:

1. The potential source of X-Radiation in the display is the High Voltage section and the picture tube.
2. When using a picture tube test equipment for service, make sure the equipment is capable of handling 25.0kV without causing X-Radiation.

NOTE: It is important to use an accurate periodically calibrated high voltage meter.

1. Turn Bright and Contrast controls fully counterclockwise.
2. Set Service switch to SERVICE.
3. Measure the high voltage. The high voltage meter (electrostatic type) reading should indicate 23.0kV +/- 1.0kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

SECTION 2 ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY PROCEDURES

2-1-1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps for the cabinet parts and the P.C.boards in order to find the items necessary for servicing. When reassembling perform the steps in the reverse order.

Note:

- (1) When removing the cabinet, work with care so as not to break the locking tabs.
- (2) Place a cloth or some other soft material under the P.C.Boards or Unit to prevent damage.
- (3) When re-installing, ensure that the connectors are connected and electrical components have not been damaged.
- (4) Do not supply power to the Unit during disassembly.

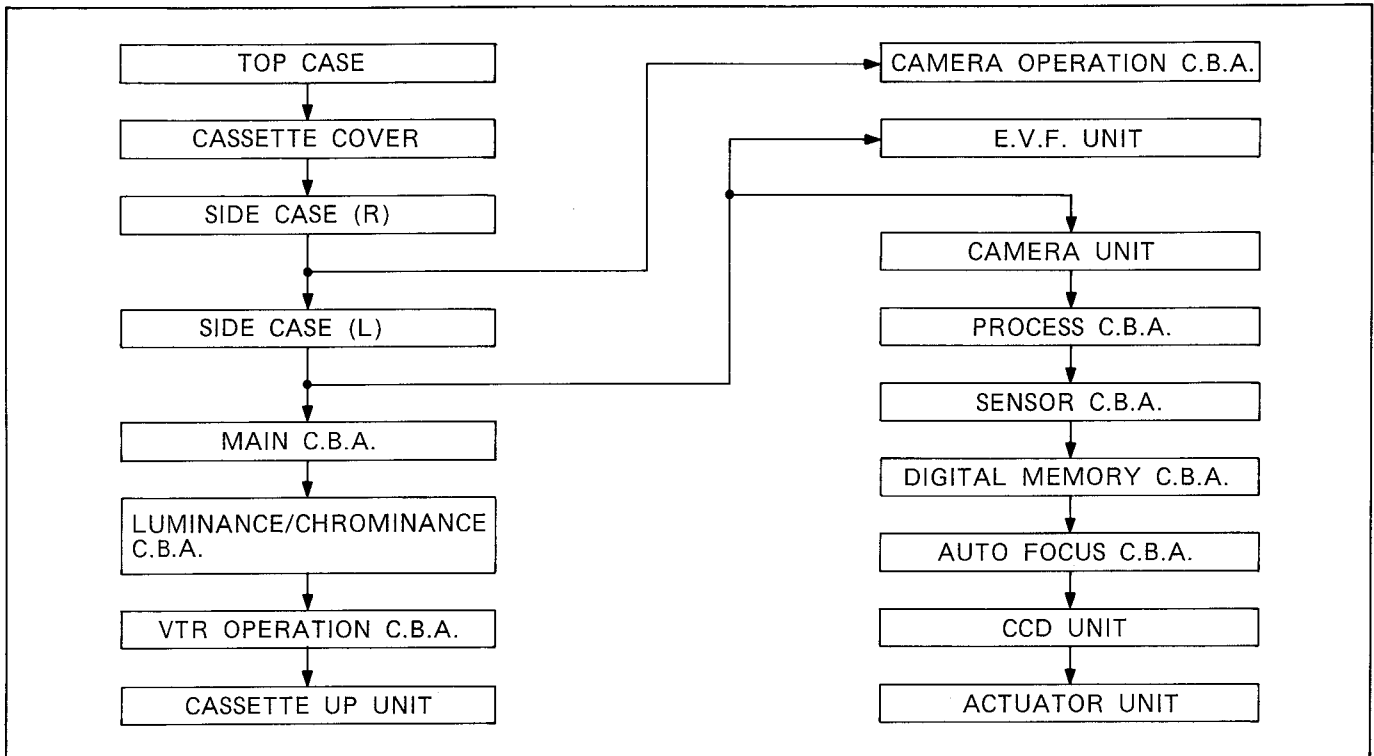


Fig. D1

2-1-2. VTR SECTION

1. Removal of Top case

- (1) Remove 3 screws (A).
- (2) Lift the Top Case from rear side.
- (3) Disconnect the Flexibe card FP001 on Sub Operation C.B.A.

2. Removal of Cassette Cover

- (1) Remove 2 screws (B).
- (2) Slide the cassette cover to as shown in Fig.D2.

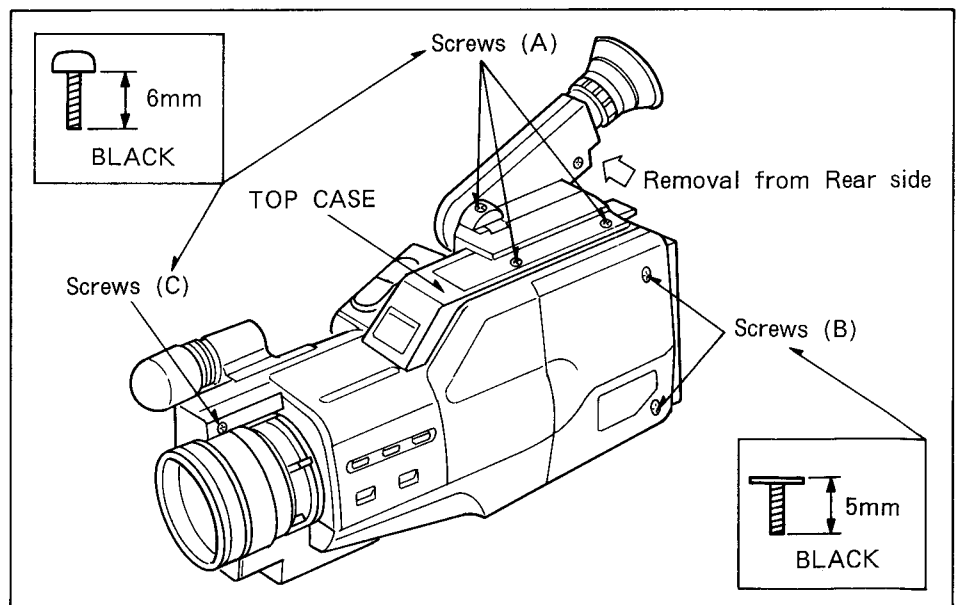


Fig. D2

3. Removal of Side Case (R)

- (1) Remove screw (C) as shown in Fig. D2 and 4 screws (D).
- (2) Disconnect the connector P001, P002 and FP001 on camera operation C.B.A.
- (3) Remove the side case (R).

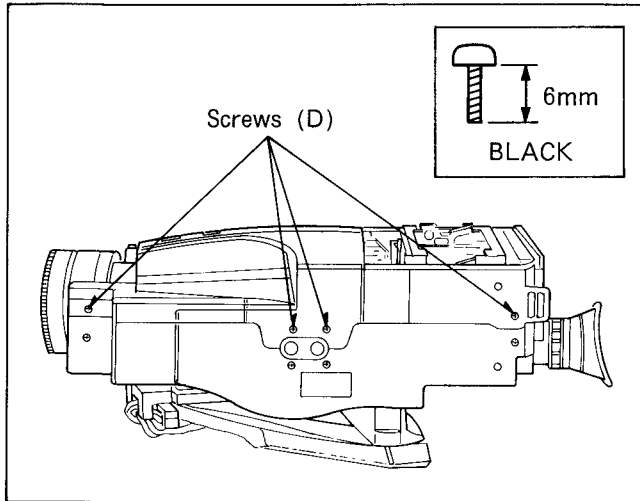


Fig. D3

4. Removal of Side Case (L)

- (1) Remove 4 screw (E) as shown in Fig. D4 and 3 screws (F) as shown in Fig. D6.

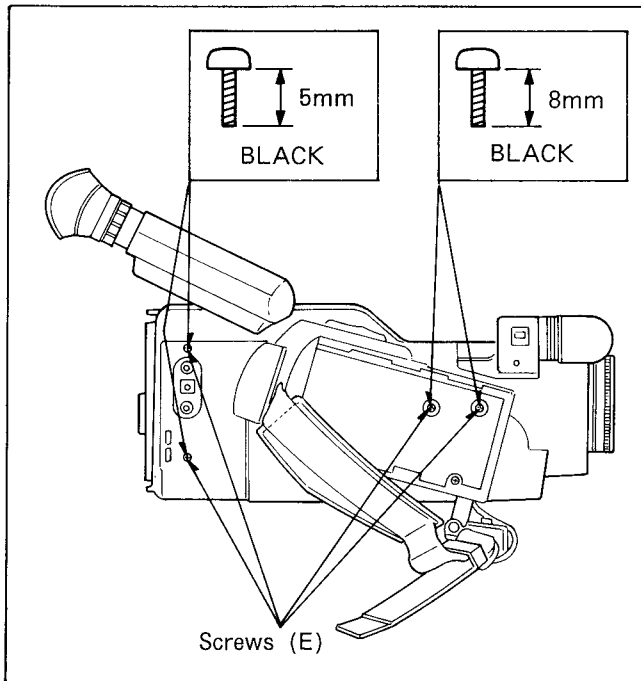


Fig. D4

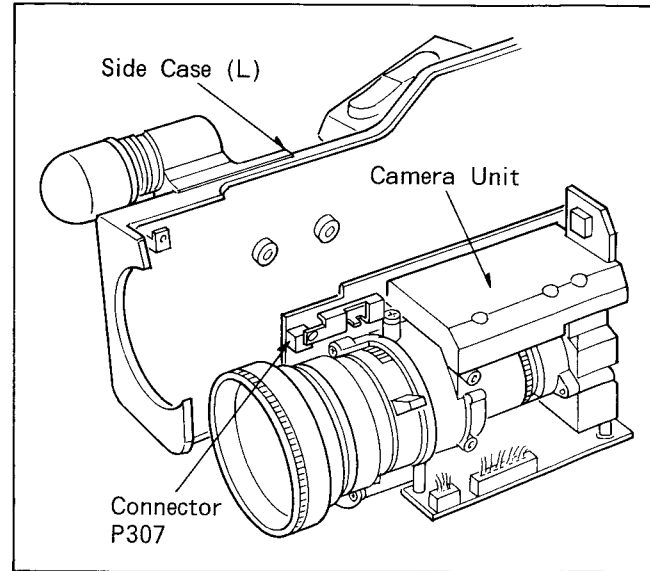


Fig. D5

- (4) Disconnect the Flexible card P1002 on Main C.B.A., P4004 (From Battery Terminal), P1001 (From Battery Terminal), P4001 (From MIC unit) and P6012 (From E.V.F unit).
- (5) Remove the side case (R).

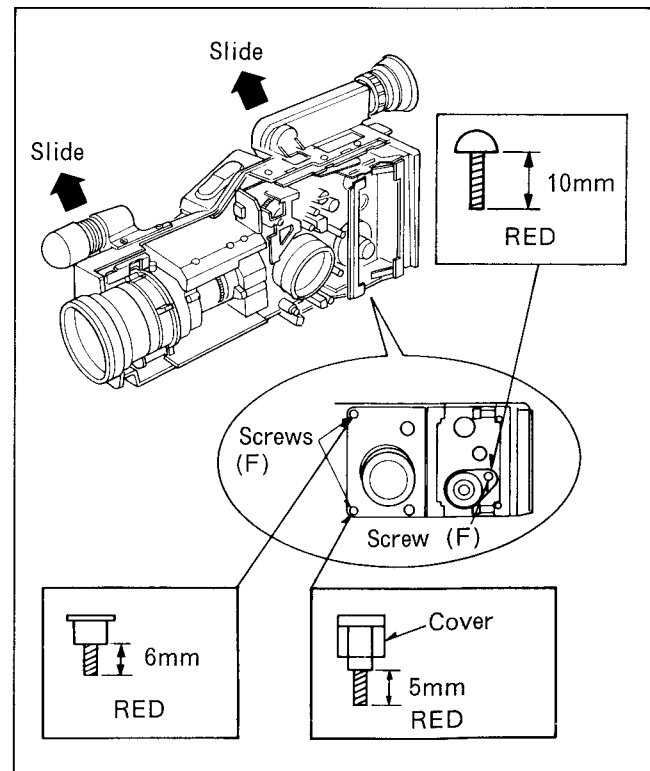


Fig. D6

- (2) Remove the side case (L) slightly.
- (3) Disconnect the connector P307 on Process C.B.A., Flexibe card FP101, P101 and P102 on Digital Memory C.B.A.

5. Removal of E.V.F. Unit

- (1) Remove 2 screws (G) to remove.

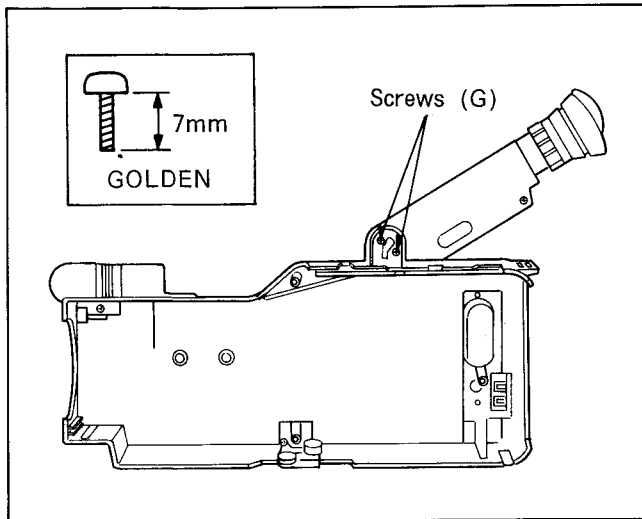


Fig. D7

6. Removal of Main C.B.A.

- (1) Remove screw (H) to remove the Main C.B.A.
- (2) Disconnect the connectors P6005, P6009, P3501 and P2001.

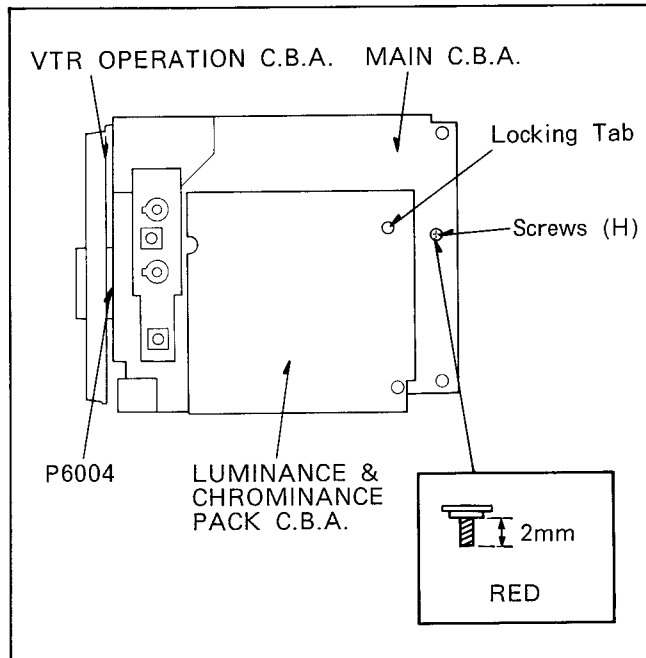


Fig. D8

7. Removal of Luminance & Chrominance C.B.A.

- (1) Unlock locking tab to lift it up.
- (2) Remove the Luminance & Chrominance C.B.A.

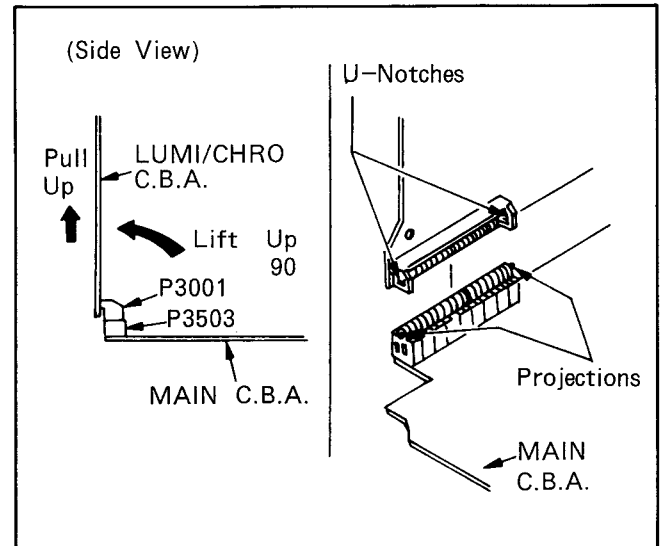


Fig. D9

8. Removal of VTR Operation C.B.A.

- (1) Disconnect the connector P6004 to remove, VTR Operation C.B.A.

9. Removal of Camera Operation C.B.A.

- (1) Remove 5 screws (I) to remove Camera Operation C.B.A.

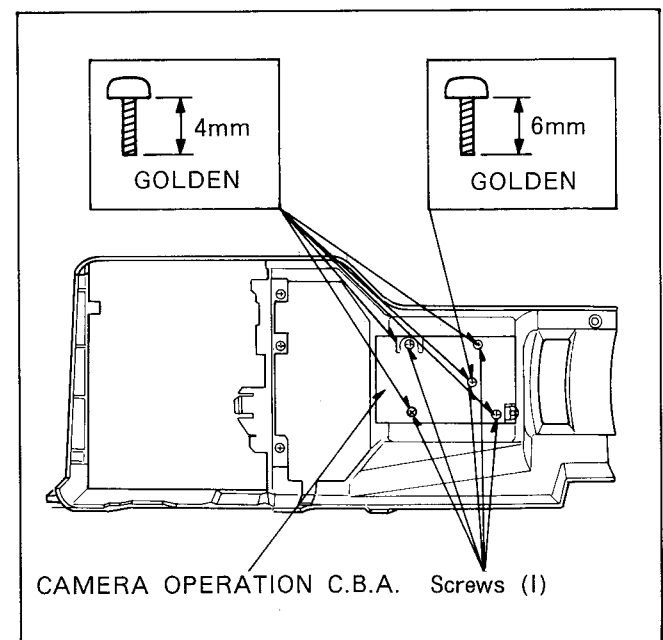


Fig. D10

10. Removal of Cassette Up Unit

- (1) Remove 2 screws (J).
- (2) Slide the cassette up unit in direction of arrow and release the pins on the moving levers of cassette up unit from the enlarged circular insertion hole at end of the cassette guide slot.

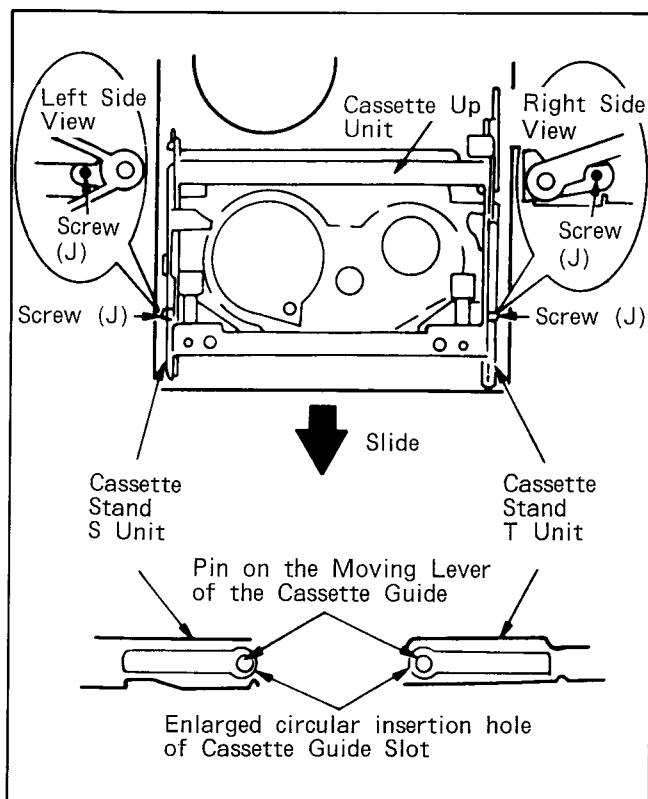


Fig. D11

2-1-3. CAMERA SECTION

1. Removal of Process C.B.A.

- (1) Remove 2 screws (K) and disconnect the connectors P303, P308, B305, B301 and flexible card FP302 on process C.B.A.
- (2) Remove the process C.B.A.

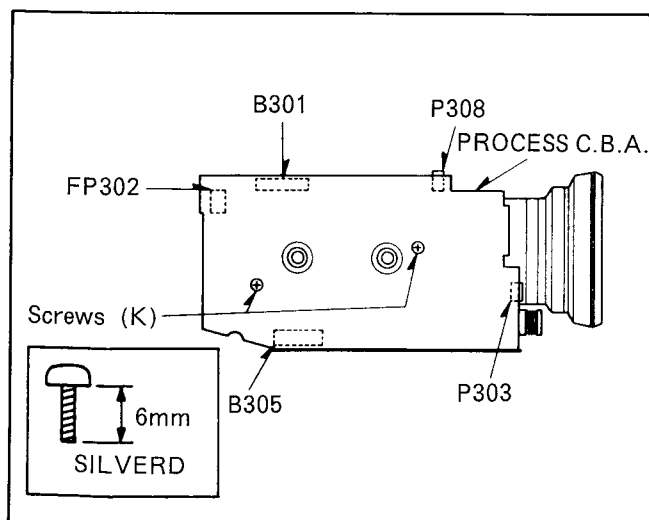


Fig. D12

2. Removal of Sensor C.B.A.

- (1) Remove 2 screws (L) to remove the shield box.

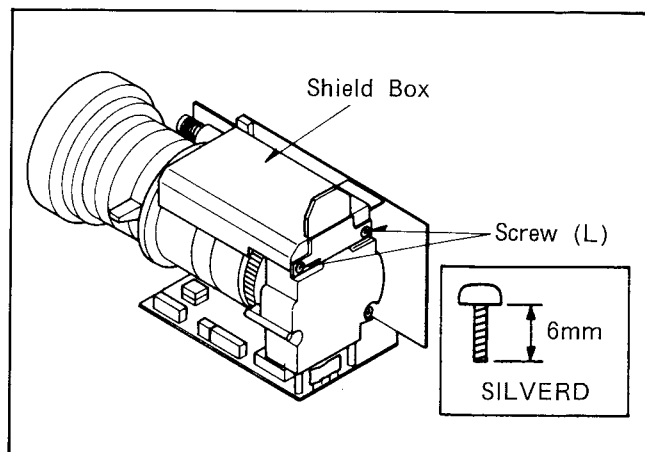


Fig. D13

- (2) Remove 2 screw (M) and disconnect the flexible card FP201 on sensor C.B.A.
- (3) Remove the sensor C.B.A.

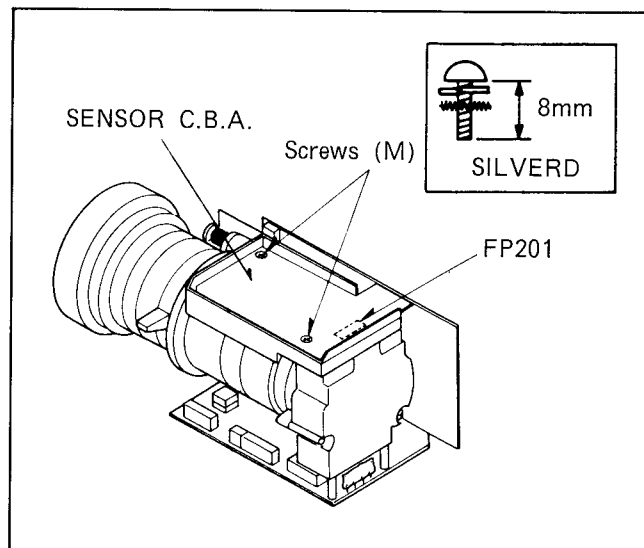


Fig. D14

3. Removal of Digital Memory C.B.A.

- (1) Remove 2 screws (T) and disconnect the connector FP102 on Digital Memory C.B.A.
- (2) Remove Digital Memory C.B.A.

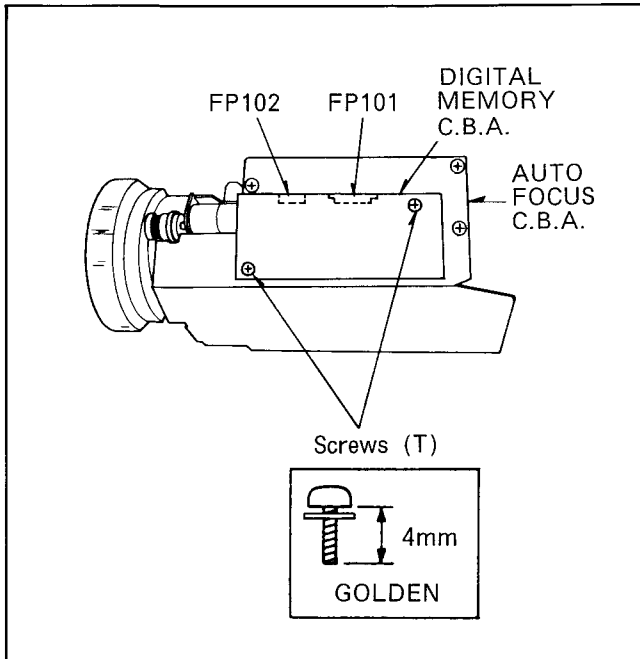


Fig. D15

4. Removal of Auto Focus C.B.A.

- (1) Remove 3 screws (N) to remove the DIGITAL MEMORY C.B.A. with barrier.
- (2) Disconnect the connectors P703, P704, P705, P701 on Auto Focus C.B.A.
- (3) Remove Auto Focus C.B.A.

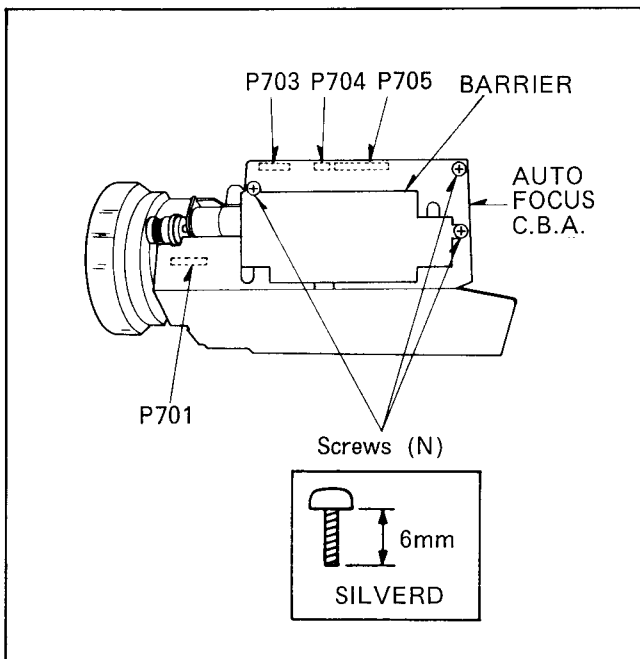


Fig. D16

5. Removal of CCD Unit

- (1) Remove 2 screws (O).
- (2) Remove 2 screws (P) and then take out the CCD Shield box.
- (3) Remove 2 screws (Q) and then take out the CCD Unit.

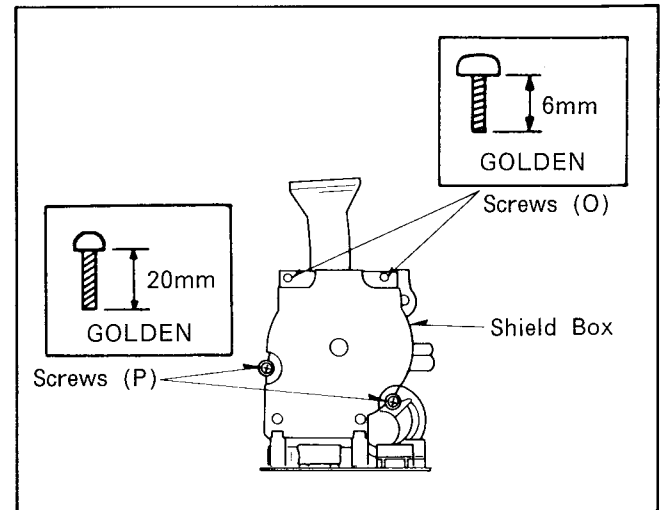


Fig. D17

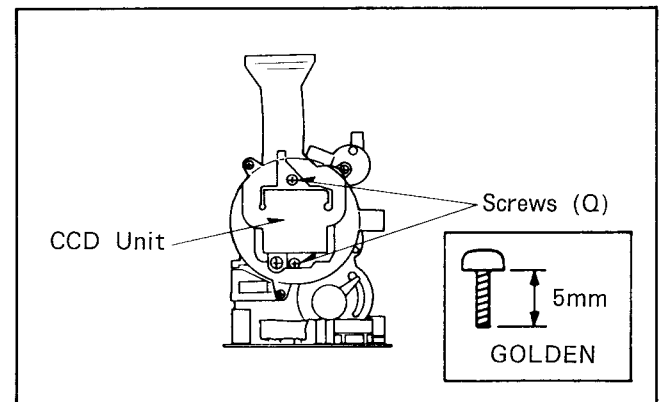


Fig. D18

6. Removal of Actuator Unit

- (1) Remove 3 screws (R) and remove actuator unit.

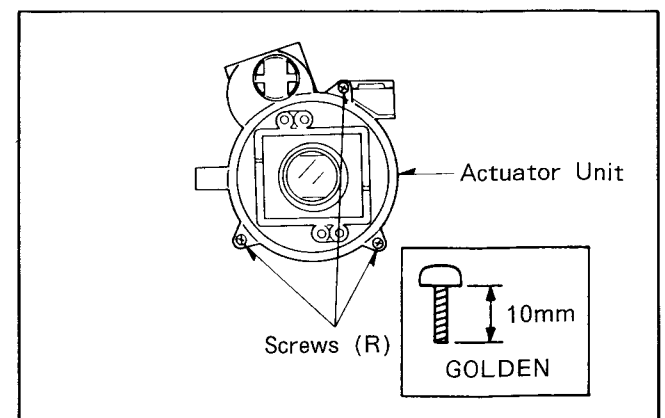


Fig. D19

2-1-4. E.V.F. SECTION

1. Removal of E.V.F. Case

- (1) Remove 2 screws (S) to remove the E.V.F. case.

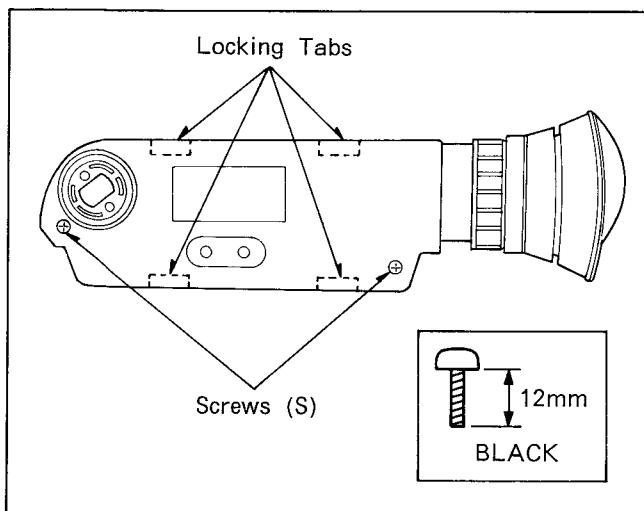


Fig. D20

2-2. PROCEDURES FOR CLEANING UPPER CYLINDER UNIT

- (1) Position the Video Head to permit access for cleaning, and hold the Upper Cylinder to keep it from turning while cleaning.
- (2) Gently rub the Video Head in the direction of tape travel with a Head Cleaning Stick (VFK27) moistened with Freon TF.
- (3) Repeat for the other Video Heads.

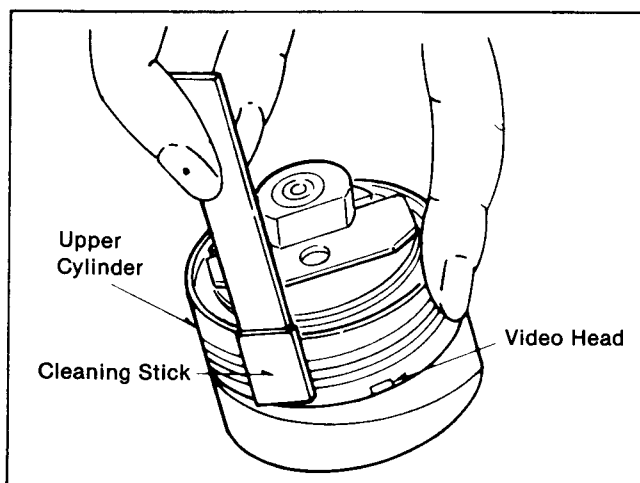


Fig. U1

Note:

- (1) Do not rub vertically.
- (2) Do not apply any pressure to the head. If the contaminant is not easily removed, continued gentle wiping will usually remove it.

2-3. REPLACEMENT AND ADJUSTMENT PROCEDURES

2-3-1. REPLACEMENT OF FOCUS LENS UNIT

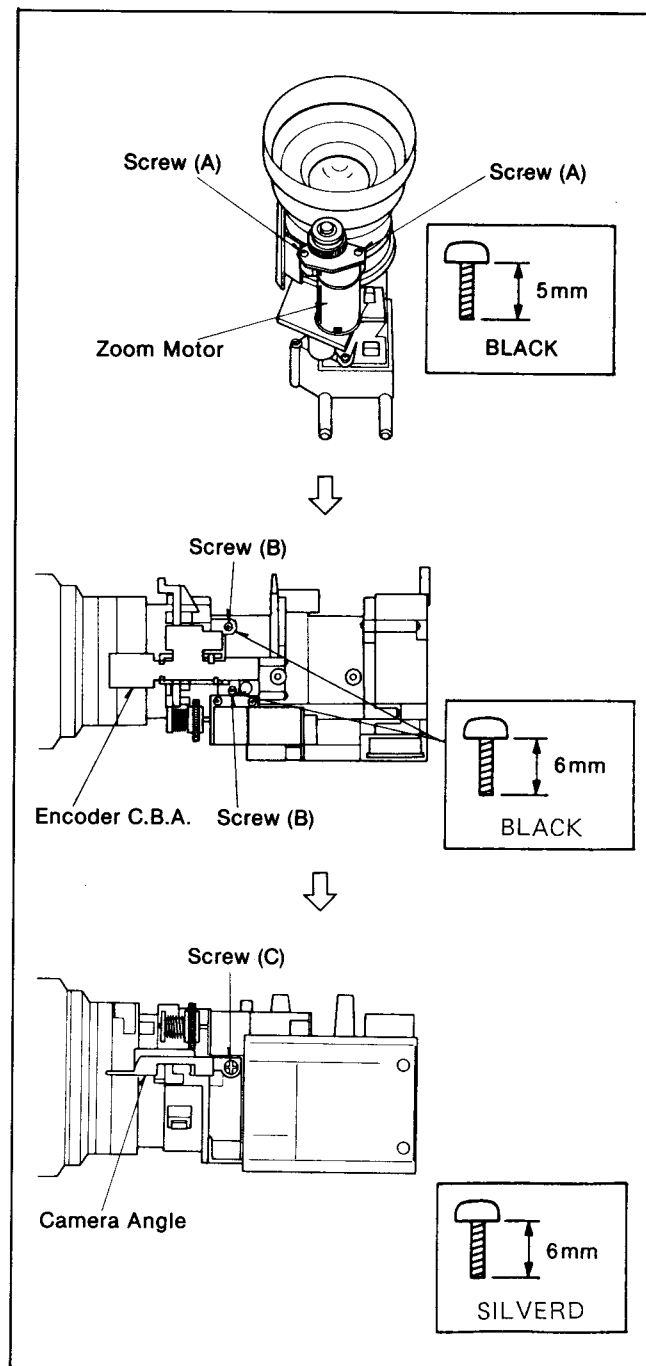


Fig.M1

- (1). Remove the camera unit from the VHS-C Movie.
- (2). Remove the C.B.As (Process, Auto Focus, Sensor) from the camera unit.
- (3). Unscrew the two screws (A) and remove the zoom motor.
- (4). Unscrew the two screws (B) and remove the encoder C.B.A.
- (5). Unscrew the screw (C) and remove the camera angle.

- (6). Remove the focus fastener and tape as shown in Fig.M2.
- (7). Remove the focus ring by turning the focus adjustment pitch to the counter clockwise.

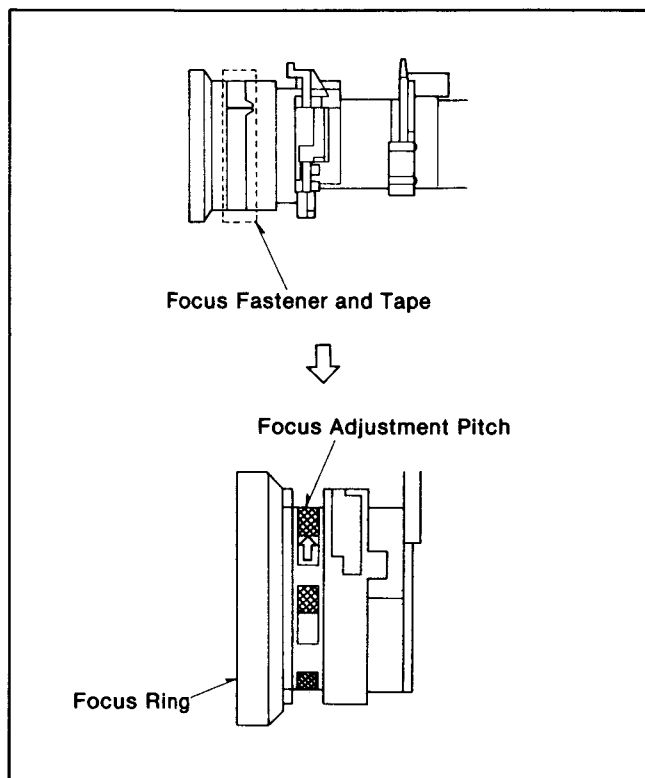


Fig.M2

- (8). Unscrew the four screws (D) and remove the focus lens unit with iris unit as shown in Fig.M3.
- (9). Remove the iris unit from focus lens unit and replace the focus lens unit.

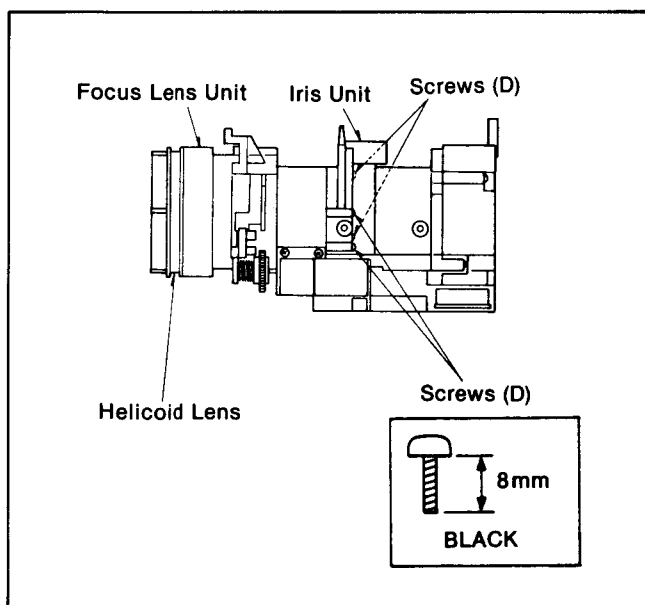


Fig.M3

[Adjustment Procedures]

Note:

Do not remove the helicoid lens from focus lens unit because it has the relation of pairing between them.

If the helicoid lens is happened to be removed, the helicoid lens should be installed as following step.

- a. Install the helicoid lens so that the projection with groove on helicoid lens comes to projection on lens unit as shown in Fig.M4.

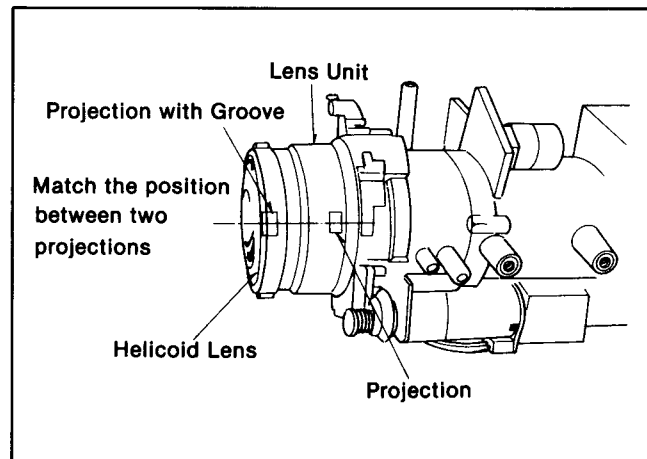


Fig. M4

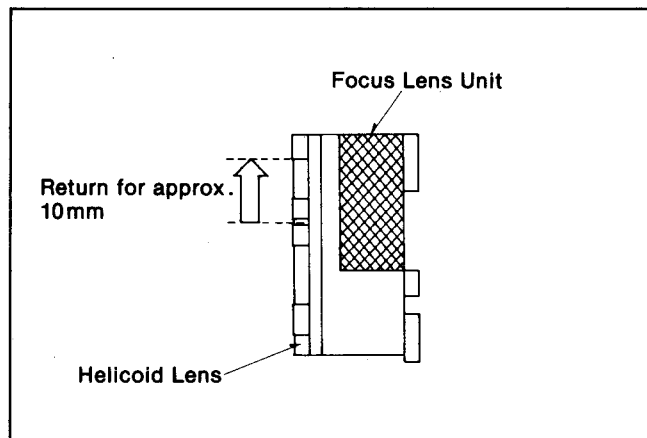


Fig. M5

- (10). After replacing the focus lens unit, install the iris unit to focus lens unit.
- (11). Install the focus lens unit with iris unit and then tighten the four screws (D) as shown in Fig. M3.
- (12). Adjust the helicoid lens position as follows.
 - a. Turn the helicoid lens to fully clockwise and return it for approx. 10mm (so that next installation become easy) as shown in Fig.M5.
- (13). Install the focus ring so that the infinity (∞) mark on focus ring is come to red-line on focus lens unit as shown in Fig.M6.

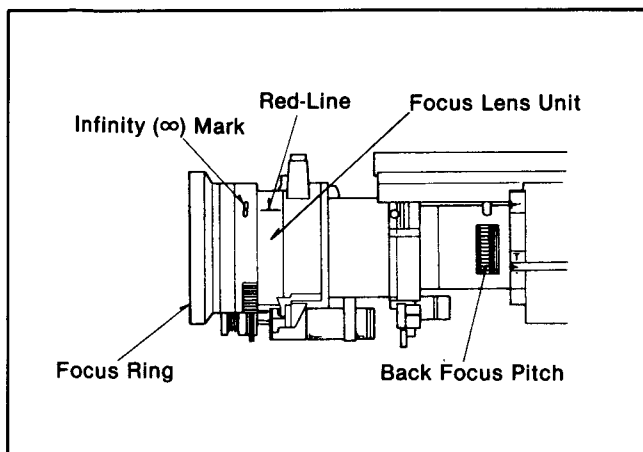


Fig. M6

- (14). Install the C.B.As (Process, Auto Focus, Sensor, Encoder) and zoom motor in reverse assembly order.
- (15). After installation of the focus ring, adjust the position of focus adjustment pitch and back focus pitch as follows.
 - a. Aim the camera at the object in 3m distance from the surface of CCD unit (in 2.9m distance from focus ring).
 - b. Set the focus ring so that the 3m mark of distance indication on focus ring is come to red-line (Distance indication Line) on focus lens unit and keep the focus ring not to move during following adjustment.
 - c. Turn the zoom ring fully to "Tele" position (54mm position).
 - d. Adjust the focus adjustment pitch (refer to Fig. M2) to obtain the best focus and stick the tape (which was stuck on the unit before) on to the focus adjustment pitch (refer to Fig. M2).
 - e. Install the focus fastener as shown in Fig. M2.
 - f. Turn the zoom ring fully to "wide" position (9mm position).
 - g. Prepare the Hunting chart for object and aim the camera at the hunting chart 3m distance.
 - h. Zoom all the way in full tele position and focus the lens on the object.
 - i. Confirm that the focus ring indicates 3m.
 - j. Adjust the back focus pitch so that the sharpest focus is obtained.
 - k. Zoom all the way back and adjust the back focus pitch (refer to Fig. M6) so that the sharpest focus is obtained.
 - l. Repeat the procedure as follows, zoom in, focus, zoom out and adjust until the best focus is obtained over the entire zoom range.

2-3-2. REPLACEMENT OF ROTARY TRANSFORMER

Reinstallation of Rotary Transformer (R) Unit

- (1) Reinstall the Rotary Transformer (R) Unit carefully so that the white portion of Upper Cylinder Unit is properly aligned with white portion of Rotary Transformer (R).
- (2) Tighten the 2 screws (C) and solder 8 Lead Pins (B).

Reinstallation of Upper Rotary Transformer (S) Unit

- (1) Before reinstalling a Upper Rotary Transformer (S) Unit, clean the surface of Rotary transformer (R) and Rotary Transformer (S) with a soft cloth.
- (2) Place the Spacer (VMX1304) on Rotary Transformer (R). Reinstall the Upper Rotary Transformer (S) Unit so that insert the shaft (VMS3504) surely through the center of Upper Rotary transformer (R).

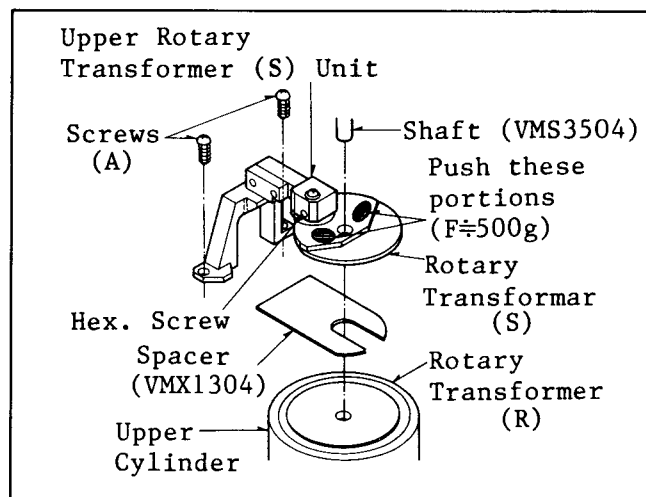


Fig. M7

- (3) Tighten the 2 screws (A).
- (4) Loosen the Hex. Screw (1.2mm).
- (5) Push the Upper Rotary Transformer (S) C.B. (F=500g) and then remove the Shaft and tighten the Hex. Screw.
- (6) Remove the spacer.

Simplified adjustment of Upper Rotary Transformer (S) Unit

- (1) Clean the surface of the Rotary Transformer (R) and (S) with a soft cloth before reinstall a Upper Rotary Transformer (S) Unit.
- (2) Place a piece of paper on Rotary Transformer (R) which has the same thickness as an ordinary page of Service Manual (not cover page but the other thinner pages) cutting as follows. (The specification of this gap is between 70μm ~ 100μm.)
- (3) Install the Rotary Transformer (S) unit so that the center portion comes to the center of Upper Cylinder Motor.
- (4) Tighten the 2 Screws (A).
- (5) Loosen the Hex. screw.

- (6) Push the screened portions of the Rotary Transformer (S) (approx. 500g) and then tighten the Hex. screw with Hex wrench.
- (7) Remove the paper which is used as spacer.
- (8) Confirm that the Upper Cylinder can rotate smoothly.

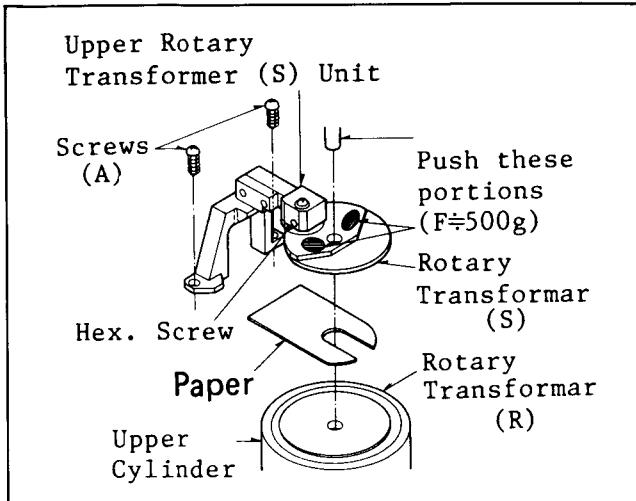


Fig.M8

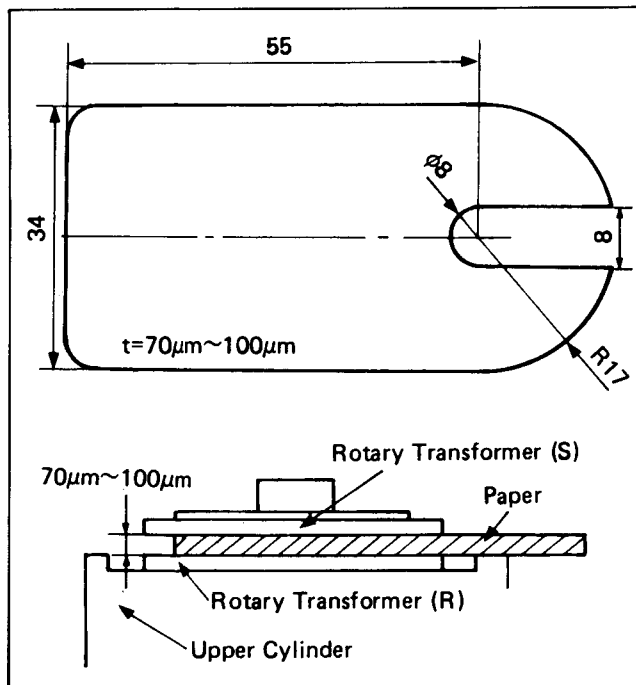


Fig.M9

Confirmation of replacement

- (1) Confirm the rotation of Upper Cylinder Unit. (Upper Cylinder Unit rotate smoothly.)
- (2) Insert the Spacer to gap of Rotaly Trans. (It must be smoothly also gap must not be too wide.)
- (3) Confirm the selfrecording and Playback picture on LP mode. (Play back picture must not noisy)
- (4) If condition is no good, review the item No.6 Reinstllation of Upper Rotary Transformer (S) Unit.
- (5) After confirmation, perform "TAPE INTERCHANGEABILITY ADJUSTMENT."

2-3-3. REPLACEMENT OF CAPSTAN MOTOR UNIT

- (1) Ensure Unit is in the STOP mode. Remove the Capstan Belt.
- (2) Unlock Flexible Cable P2603 on the Drive C.B.A.

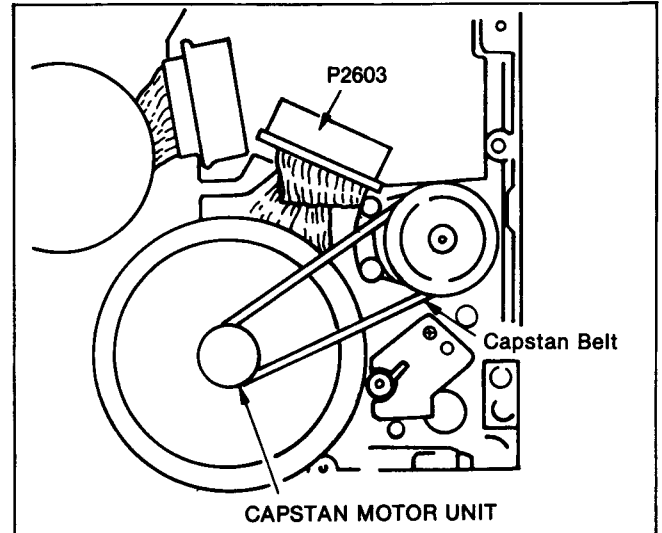


Fig. M10

- (3) Remove the Cassette Up Holder, LP Head Amp, head Amp Holder and Mode Select Switch Unit.
- (4) Take out the Idler Gear while pushing on the Tape Guide lever Unit unit until it clears the Idler Gear Teeth as shown in Fig. M11.

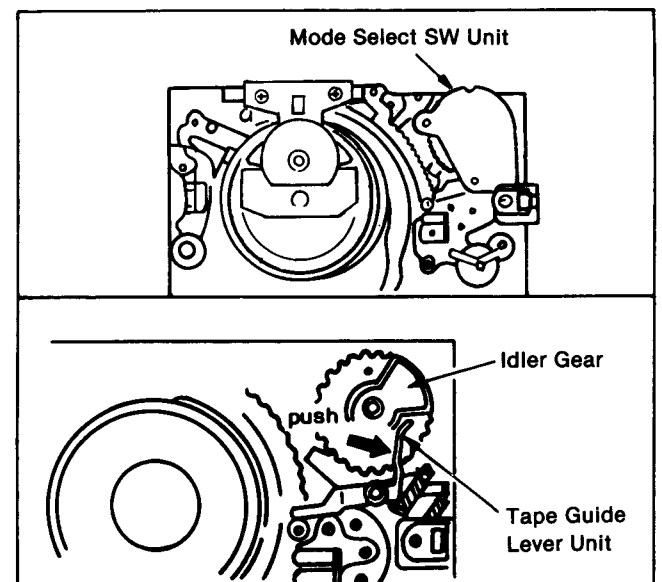


Fig. M11

- (5) Remove 2 screws (B). Then remove screws (C) While slightly pushing on the Sector Gear Unit to remove screw (C) as shown in Fig. M12. Then remove the A/C Head Base Unit.

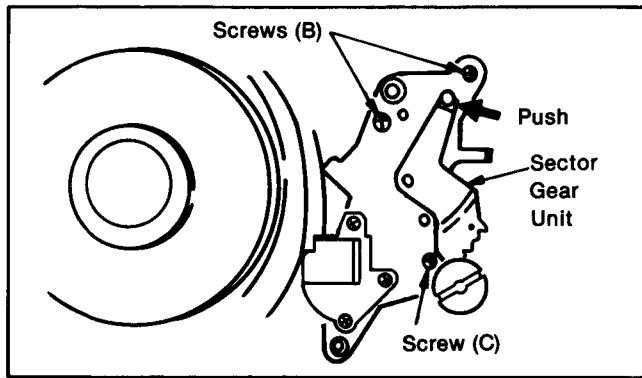


Fig. M12

- (6) Remove the Cut Washer and Motor Gear. Then place the Unit in play position completely by rotating loading Idle Gear clockwise as shown in Fig. M13.

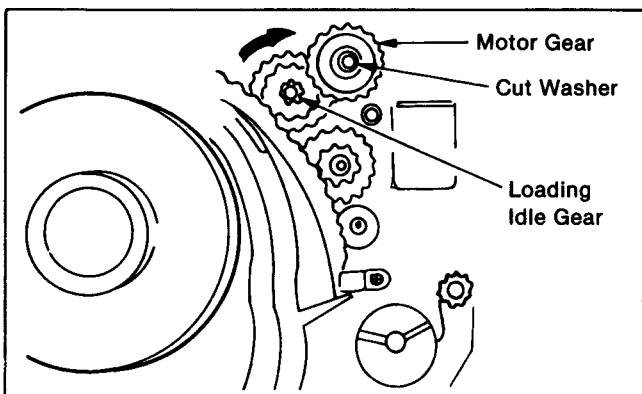


Fig. M13

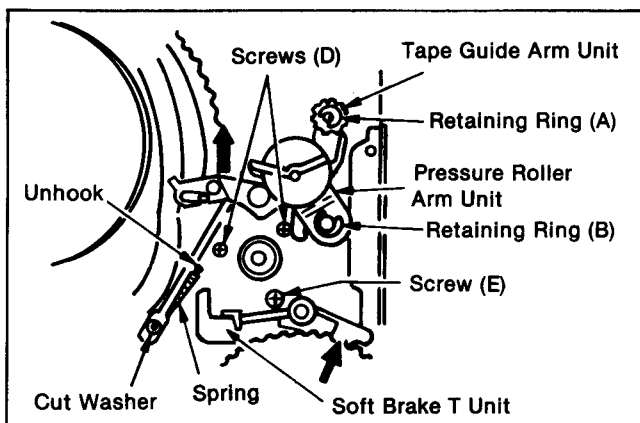


Fig. M14

- (7) Remove Retaining Ring (A) and Tape Guide Arm Unit by pushing it in the direction shown by arrow and lifting it off its Post.
- (8) Remove the Cut Washer and unhook the Spring.
- (9) Remove Retaining Ring (B) and Pressure Roller Arm Unit.
- (10) Refer to the Disassembly/Assembly and Adjustment Procedures of Mechanism. Use steps 3, 4 and 5 to remove the Takeup Reel Gear, Clutch Gear Unit and Soft Brake T Unit.
- (11) Remove 2 Screws (D) and Screw (E) while pushing slightly on the Soft Brake T Unit. Then remove the Capstan Stator Unit from Bottom Side.
- (12) Replace the new Capstan Motor Unit and then tighten 2 Screws (D) and Screw (E).

Adjustment of FG Head Gap

* Specification: 0.1~0.15mm

- (1) Slightly loosen the 2 screws.
- (2) Put the paper which is used for cover page of this volume into the gap between F.G.Head and Capstan rotor.
- (3) After adjustment, tighten 2 screws.

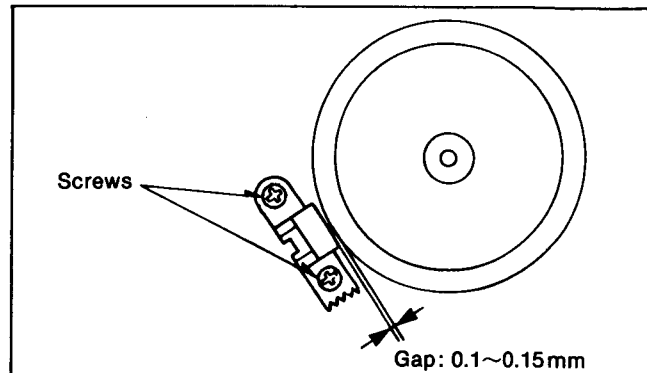


Fig. M15

Note:

Do not touch the surface of rotor and keep any magnetizable material away.

2-3-4. ADJUSTMENT OF TENSION POST POSITION

- (1) Remove the Cassette Up Unit.
- (2) Cover the Tape End Sensor and Cassette Up/Down Sensor with Black Tape.
- (3) Push the Play button to complete loading operation sequence.
- (4) As soon as loading is completed, disconnect the AC plug of AC Adaptor.
- (5) Loosen Screw (F) a little bit and adjust the Tension Adjust Piece (in either direction) as indicated by the arrow so that the center of the Tension Post is 1mm to the left of the center of the S1 Post as shown in Fig. M16. Tighten Screw (F) to secure it.

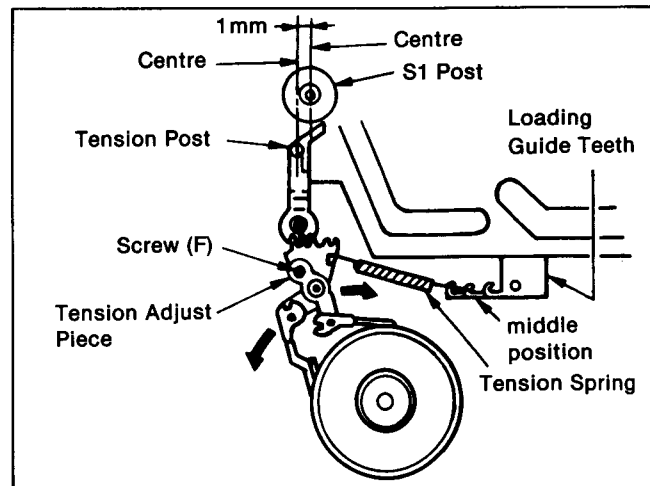


Fig. M16

Note:

After this adjustment, reposition Tension Spring on Loading Guide Teeth to middle position as a Back Tension Adjustment as shown in Fig. M16.

2-3-5. HEIGHT ADJUSTMENT OF TAPE GUIDE POST (PRELIMINARY ADJUSTMENT)

Height adjustment of S1 Post

* Specification: $14.72 \pm 0.1\text{mm}$

- (1) For adjustment of S1 post height, turn 4mm Nut (A) slightly in either direction as necessary to the correct clearance between the upper edge of the lower tape guide on S1 Post and the lower portion of Cassette Stand S Unit.

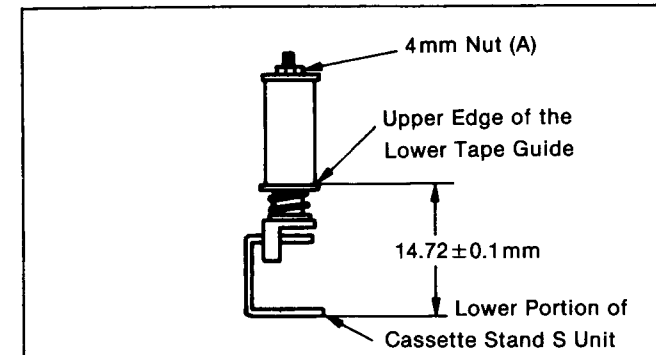


Fig. M17

Height adjustment of S2 and T1 Posts

* Specification:
S2 Post $0.56 \pm 0.1\text{mm}$
T1 Post $0.74 \pm 0.1\text{mm}$

- (1) For adjustment of S2 and T1 post height, loosen the Black Lock Screw located on the lower portion of Posts (S2 & T1) using the Lock Screwdriver.
- (2) Turn top of post with Hex. Wrench (1.5mm) slightly in either direction as necessary to the correct clearance as shown in Fig. M18.

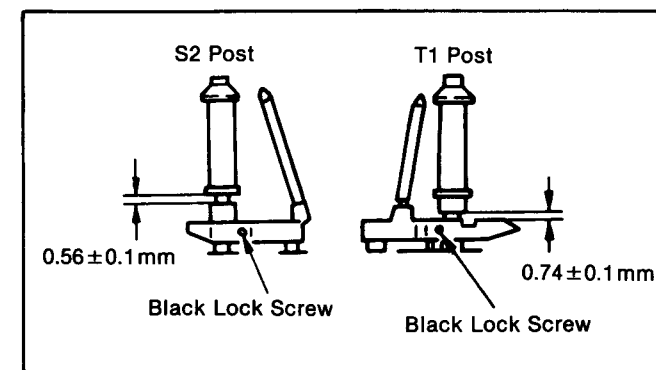


Fig. M18

2-3-6. TAPE INTERCHANGEABILITY ADJUSTMENT (FINAL ADJUSTMENT)

Note:

- 1) To perform these adjustment/confirmation procedures, make sure that the Tracking Control is set in the fixed (neutral) position by pushing both of the Tracking Control Up/Down Switches, on the Main C.B.A., in at the same time.
- 2) Before these adjustment/confirmation procedures, remove the cassette protective Tape Cover from a Cassette Tape or the Alignment Tape (VFMS0002H6C).

* Equipment Required:
Dual Trace Oscilloscope
Alignment Tape (VFMS0002H6C)
Hex. Wrench (1.5mm)

1. Confirmation of Tape Travel

- (1) Play back a cassette tape and confirm that the tape travels without curling at the upper and lower guides on Posts S2 and T1.

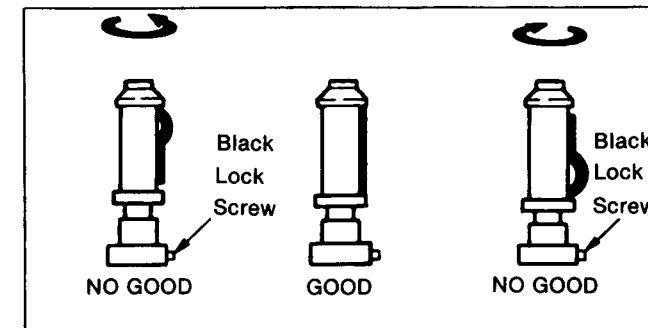


Fig. M19

- (2) If curling is apparent, adjust the height of posts by turning the top of Post with Hex. Wrench. (for S2 and T1)

Note:

Before turning S2 and T1, slightly loosen the Black Lock Screw using the Lock Screwdriver.

2. Confirmation of A/C Head

This confirmation is required when the A/C Head or Capstan Motor is replaced and for a preliminary height adjustment.

For final adjustment, perform items 3 and 4.

- (1) Looking at the lower edge of the Control Head with the tape in motion, ensure that the lower edge of the tape runs 0.25mm above the lower edge of the Control Head. If it doesn't, turn Black Screw (A) slightly in either direction as necessary to correct it. Turn clockwise to lower the head and counterclockwise to raise it.

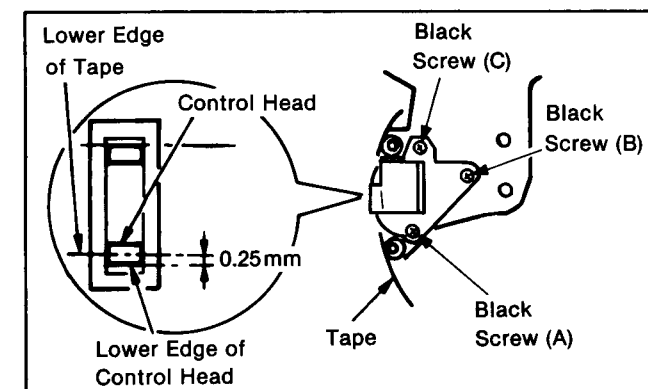


Fig. M20

3. Confirmation of Tilt of A/C Head

- (1) Play back a cassette tape and confirm that the tape runs properly between lower and upper limits of T3 Post. Also confirm that the tape is running smoothly.
- (2) If adjustment is required, turn Black Screw (B), in Fig. M20, counterclockwise until curling is apparent at lower edge of T3 Post. Then turn Black screw (B) clockwise until the curling smooths.

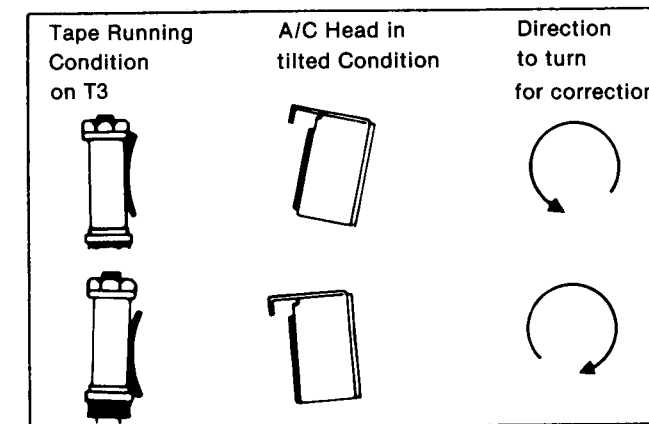


Fig. M21

4. Height and Azimuth Adjustment of A/C Head

- (1) Connect the oscilloscope to TP4001 on the Main C.B.A.
- (2) Play back the Monoscope portion (6KHz, Mono) of the Alignment Tape.
- (3) Adjust Black screw (C) on the A/C Head Base in Fig. M20 so that the output level is at a maximum.

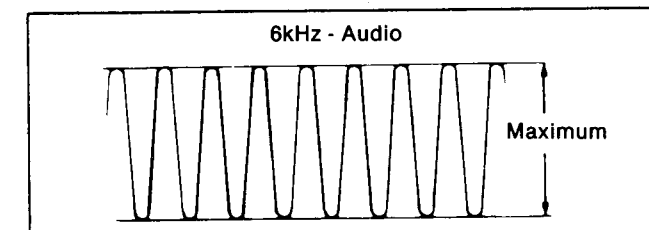


Fig. M22

- (4) Readjust Black screw (A) shown in Fig. M20 for maximum output.
- (5) Disconnect the oscilloscope.

5. Horizontal Position Adjustment of A/C Head

- (1) Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.
- (2) Play back the monoscope portion of the Alignment Tape and confirm that RF envelope appears, as in Fig. M24.
- (3) If adjustment is required, slowly move the A/C Head Base back and forth using a screwdriver by turning screw (D) so that the envelope is at a maximum.

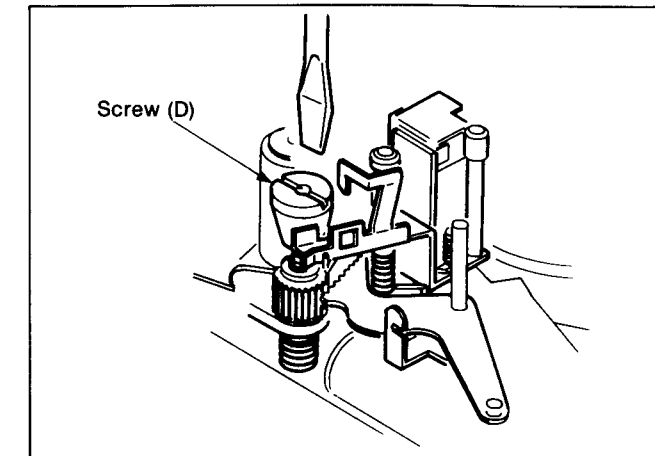


Fig. M23

- (4) Confirmation of the correct adjustment can be made by alternately pushing the Tracking Control Up/Down Switches, on the Main C.B.A. to check the symmetry of the envelope.
- (5) Reconfirm the symmetry of the envelope. If it has changed, repeat step (3) and (4).

6. Confirmation/Adjustment of Envelope Output

- (1) Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.
- (2) Playback the Monoscope portion of the Alignment Tape and adjust the height of posts S2 and T1 watching the scope display so that the envelope becomes as flat as possible. ($V1/V\text{-max} \geq 0.7$, $V2/V\text{-max} \geq 0.8$) If adjustment is required, turn top of post with Hex. Wrench (1.5mm). For adjustment of S2 and T1, refer to Item 1 and its Note.

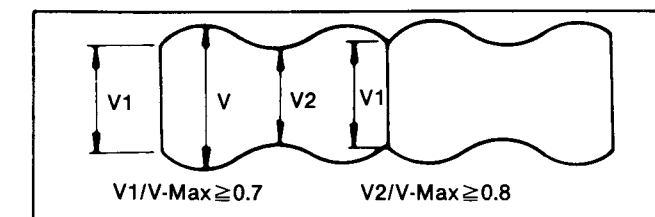


Fig. M24

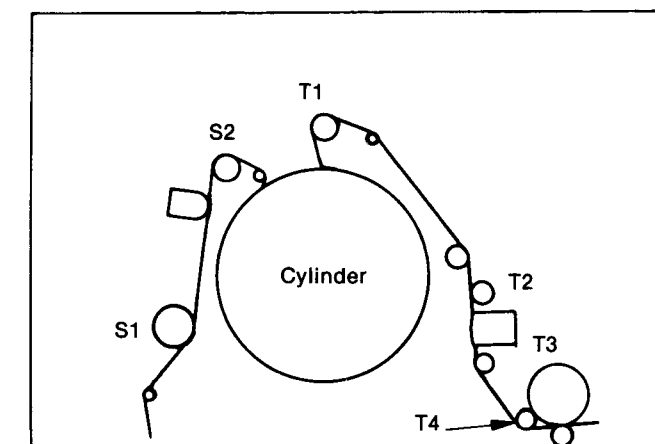
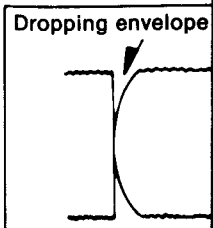
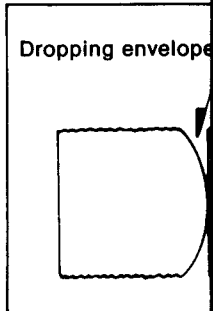


Fig. M25

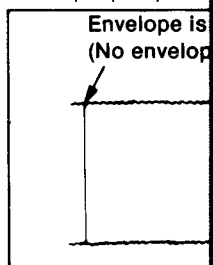
- (3) When the scope display shows a flat envelope, adjust the height of posts S2 and T1.



- (4) When the scope display shows a flat envelope, adjust the height of posts S2 and T1.



- (5) The scope display shows a flat envelope properly.

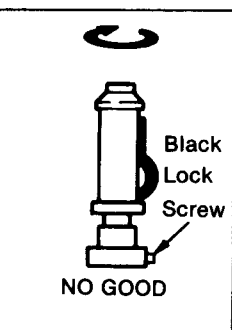


Note:

- 1) Upon completion of these adjustment/confirmation procedures, use the Lock Screwdriver to tighten the Black Lock Screw on the Horizontal Position Adjustment of A/C Head.
- 2) After adjustment/confirmation procedures, perform the Tape Covering procedure.

Tape Travel

and confirm that the tape runs properly between lower and upper limits of T3 Post. Also confirm that the tape is running smoothly.



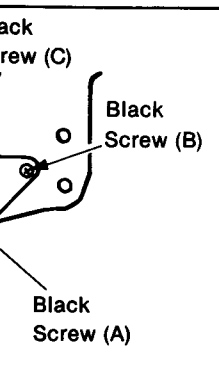
Adjust the height of the T3 Post with Hex. Wrench.

slightly loosen the Black Lock Screwdriver.

A/C Head

on the A/C Head or for a preliminary adjustment.

of the Control Head ensure that the lower limit is above the lower limit. If it doesn't, turn the screw in either direction. Turn clockwise to raise the head and counterclockwise to lower it.



3. Confirmation of Tilt of A/C Head

- Play back a cassette tape and confirm that the tape runs properly between lower and upper limits of T3 Post. Also confirm that the tape is running smoothly.
- If adjustment is required, turn Black Screw (B), in Fig. M20, counterclockwise until the tape is at the lower edge of T3 Post. Then turn Black screw (B) clockwise until the tape is running smoothly.

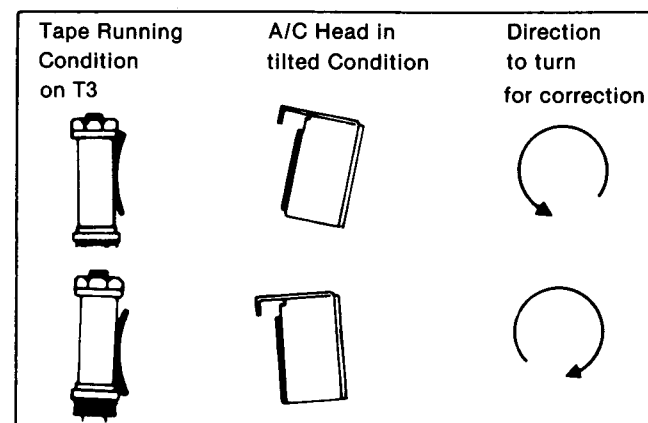


Fig. M21

4. Height and Azimuth Adjustment of A/C Head

- Connect the oscilloscope to TP4001 on the Main C.B.A.
- Play back the Monoscope portion (6KHz, Mono) of the Alignment Tape.
- Adjust Black screw (C) on the A/C Head Base in Fig. M20 so that the output level is at a maximum.

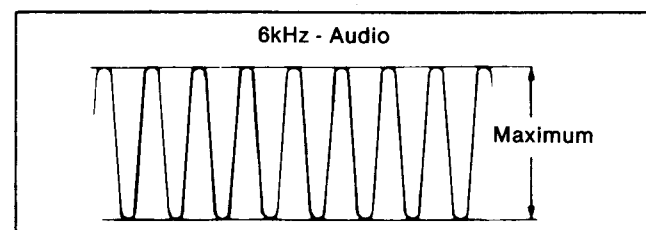


Fig. M22

- Readjust Black screw (A) shown in Fig. M20 for maximum output.
- Disconnect the oscilloscope.

5. Horizontal Position Adjustment of A/C Head

- Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.
- Play back the monoscope portion of the Alignment Tape and confirm that RF envelope appears, as in Fig. M24.
- If adjustment is required, slowly move the A/C Head Base back and forth using a screwdriver by turning screw (D) so that the envelope is at a maximum.

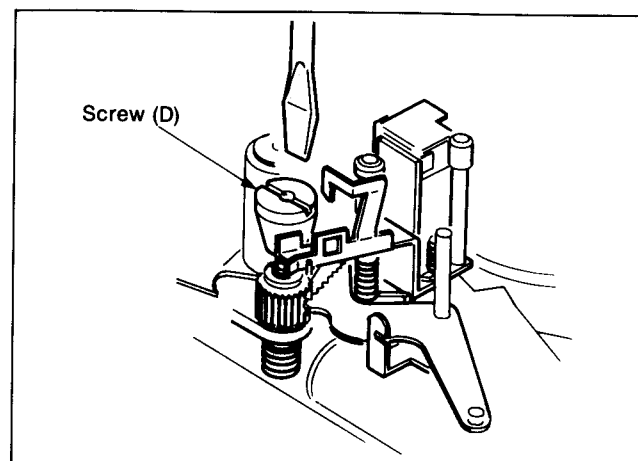


Fig. M23

- Confirmation of the correct adjustment can be made by alternately pushing the Tracking Control Up/Down Switches, on the Main C.B.A. to check the symmetry of the envelope.
- Reconfirm the symmetry of the envelope. If it has changed, repeat step (3) and (4).

6. Confirmation/Adjustment of Envelope Output

- Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.
- Playback the Monoscope portion of the Alignment Tape and adjust the height of posts S2 and T1 watching the scope display so that the envelope becomes as flat as possible. ($V1/V_{max} \geq 0.7$, $V2/V_{max} \geq 0.8$) If adjustment is required, turn top of post with Hex. Wrench (1.5mm). For adjustment of S2 and T1, refer to Item 1 and its Note.

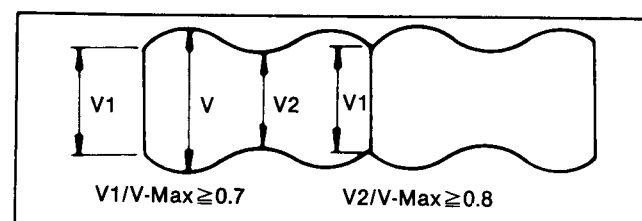


Fig. M24

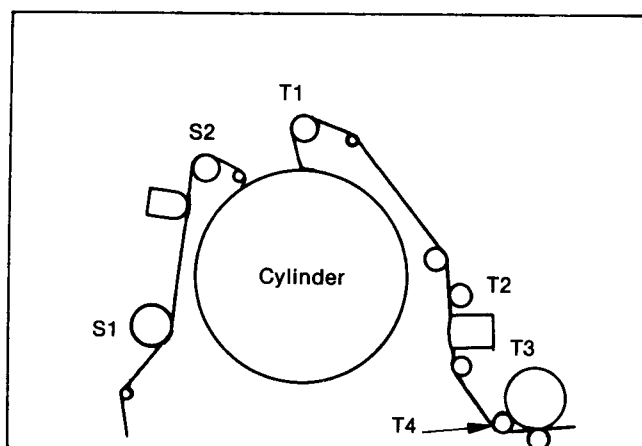


Fig. M25

- When the scope display is as shown in Fig. M22, adjust the height of S2 so that the waveform looks like Fig. M28.

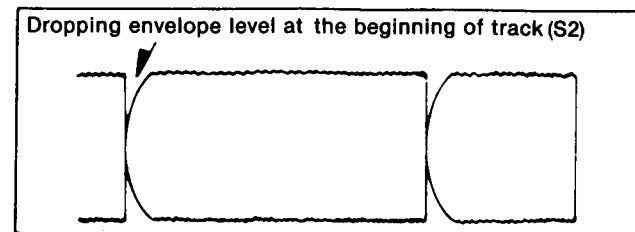


Fig. M26

- When the scope display is as shown in Fig. M27, adjust the height of T1 so that the waveform looks like Fig. M28.

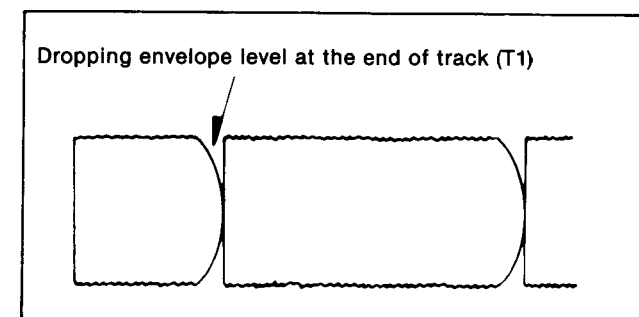


Fig. M27

- The scope display should appear as shown in Fig. M28 when S2 and T1 Posts are adjusted properly.

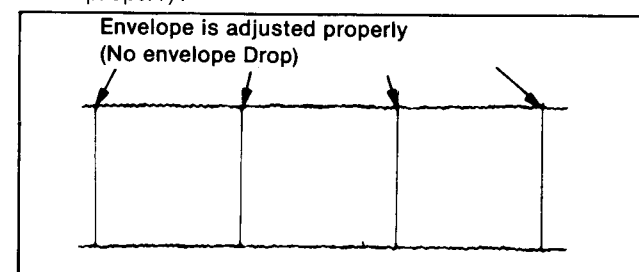


Fig. M28

Note:

- Upon completion of adjustment of S2 and T1, tighten the Black Lock Screw on S2 and T1 using Lock Screwdriver. Then confirm the Horizontal Position of A/C Head by pushing the Tracking Control Up or Down switches on the Main C.B.A. alternately to check the symmetry of the envelope. And if required, perform "Horizontal Position Adjustment of A/C Head".
- After these adjustment/confirmation procedures, replace the cassette protective Tape Cover.

2-3-7. ASSEMBLY AND ADJUSTMENT PROCEDURES OF MECHANISM

This procedure starts with the condition that the Cabinet parts and Cassette Up Unit have been removed.
When re-assembling, perform the step (s) in the reverse order.

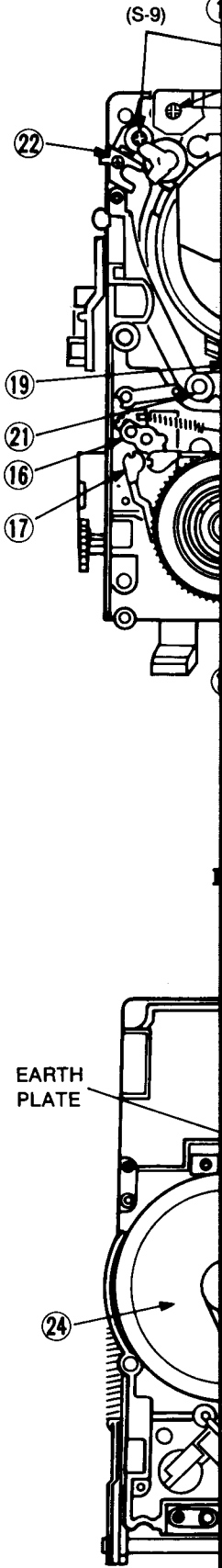
STEP/ LOC No.	START- ING No.	PART	REMOVAL		INSTALLATION
			Fig. No.	REMOVE * UNHOOK/UNLOCK/ RELEASE	
①	1	RT (S) UNIT D.D. CYL. UNIT	T/B M30, 31	3 (S-0) * Connectors 2 (S-1)	* Remove the Earth Plate before Step ①
②	3	TAKEUP REEL GEAR	T M30, 32	(C-1), (W-1) <Note 1>	(+)
③	3	CLUTCH GEAR UNIT	T M30, 32	(C-2), (W-2) <Note 1>	(+)
④	4	SOFT BRAKE T UNIT	T M30, 32	(C-3), * (P-1) <Note 1>	(+)
⑤	6	HEAD AMP ANGLE	T M33	2 (S-2), (S-3) * Connector	* Remove the Head amp Unit before Step ⑤.
⑥	6	MODE SELECT SWITCH UNIT	T M30, 33	(S-3) * Connector	Align the Punch Mark with the Notch. # STOP MODE
⑦	6	TAPE GUIDE LEVER UNIT	T M30, 33	(C-4), * (P-2) <Note 1>	See, Hooking Position.
⑧	7	IDLER GEAR	T M30, 34		(+) Align the Notch with the Shaft of Loading Idle Gear. # STOP MODE
⑨	8	SECTOR GEAR UNIT	T M30, 34	(C-5)	(+) Align the Hole with the Notch. # STOP MODE
⑩	9	A/C HEAD & BASE UNIT	T M30, 34	4 (N-1) for removal of A/C HEAD	<Note 2>
⑪	10	MOTOR GEAR	T M30, 35	(C-5) <Note 1>	(+) # STOP MODE (Fig. M31)
⑫	11, 10	LOADING MOTOR UNIT	T M35	2 (S-5)	<Note 2>
⑬	10	TAPE GUIDE LEVER UNIT	T M30, 35	(R-1), * (P-3)	See, Hooking Position.
⑭	14	TENSION ARM UNIT	T M30, 36	(C-7), (W-3) <Note 1>	(+) See, Adjustment of Tension Post Position. Align the Punch Mark with the Notch. # Loading
⑮	15	SUPPLY REEL TABLE UNIT	T M30, 36	(C-8), (W-4) <Note 1>	(+)
⑯	15	TENSION BAND ARM UNIT	T M30, 36	(C-9), * (P-4) <Note 1>	(+)
⑰	16, 14	CASSETTE STAND S ASS'Y	T M30, 37	2 (S-6), * Connector	(+) <Note 2>

Fig. M29-1

STEP/ LOC No.	START- ING No.	PART	REMOVAL		INSTALLATION
			Fig. No.	REMOVE * UNHOOK/UNLOCK/ RELEASE	
⑱	18	SHIELD COVER	B M31	(S-7)	
⑲	18, 11, 10, 2	LOADING GUIDE ASS'Y	T M30, 38	6(S-8), * (L-1), * Connector	(+) <Note 2> <Note 3> # Loading
⑳	19	TAKEUP SHAFT HOLDER ASS'Y	T M30	(C-10)	(+) <Note 1>
㉑	19	SUPPLY SHAFT HOLDER ASS'Y	T M30		(+)
㉒	19	V STOPPER BASE ASS'Y	T M30	2 (S-9)	
㉓	19, 13	PRESSURE ROLLER ARM UNIT	T M30, 39	(R-2), (C-11), * (P-5), <Note 1>	(+) See, Hooking Condition.
㉔	23, 5	CAPSTAN MOTOR UNIT	T M30, 31, 39	* Capstan Belt, 3 (S-10), * Connector	<Note 2> See, Replacement of Capstan Motor Unit.
㉕	4	CASSETTE STAND-T	T M30, 39	2(S-11)	(+) <Note 2>
㉖	19	RING GUIDE 1	T M40	(S-12)	See, setting condition.
㉗	19	RING GUIDE 3	T M40	(S-13)	See, setting condition.
㉘	27, 26, 21, 20	LOADING RING S UNIT	T M30, 40		(+) Align the Hole with punch Mark.
㉙	28	LOADING DRIVE GEAR-T	T M40	(C-12) <Note 1>	(+)
㉚	28	RING GUIDE GEAR-S (2 USED)	T M40		White Colour Gear
㉛	31	RING LIMITER	T M30, 41	(S-14)	
㉜	28	LOADING RING T UNIT	T M40, 41		See, setting Condition. Align the Punch Mark with the Notch.
㉝	31	LOADING IDLE GEAR	T M30, 41		(+) Align the Punch Mark with the Notch.
㉞	32, 28, 19	RING GUIDE GEAR-T (2 USED)	T M41		(+) Black Color Gear # STOP MODE
㉟	10	LOADING DRIVE GEAR-S	T M40, 41	(C-13) <Note 1>	(+)
㊱	33, 32, 30, 28	RING GUIDE-2	T M40, 41	(S-15)	
㊲	32, 28, 22, 19, 17	LOADING GUIDE-S UNIT	T M42	3(S-16)	<Note 2>

List of Abbreviations:
T=Top, B=Bottom,
(R-1)=Retaining Ring (R-1); (P-1)=Spring (P-1); (S-1)=Screw (S-1);
(W-1)=Washer (W-1); 2(S-2)=2 Screws (S-2); (C-1)=Cut Washer (C-1);
(L-1)=Locking Tab (L-1)
(N-1)=Nut (N-1)
(+)=Refer to Exploded Views for Lubrication information

Fig. M29-2



STEP/ LOC No.	START- ING No.	PART	REMOVAL		INSTALLATION
			Fig. No.	REMOVE * UNHOOK/UNLOCK/ RELEASE	ADJUSTMENT # CONDITION * REMARKS
18	18	SHIELD COVER	B M31	(S-7)	
19	18, 11, 10, 2	LOADING GUIDE ASS'Y	T M30, 38	6(S-8), * (L-1), * Connector	(+) < Note 2 > < Note 3 > # Loading
20	19	TAKEUP SHAFT HOLDER ASS'Y	T M30	(C-10)	(+) < Note 1 >
21	19	SUPPLY SHAFT HOLDER ASS'Y	T M30		(+)
22	19	V STOPPER BASE ASS'Y	T M30	2 (S-9)	
23	19, 13	PRESSURE ROLLER ARM UNIT	T M30, 39	(R-2), (C-11), * (P-5), < Note 1 >	(+) See, Hooking Condition.
24	23, 5	CAPSTAN MOTOR UNIT	T M30, 31, 39	* Capstan Belt, 3 (S-10), * Connector	< Note 2 > See, Replacement of Capstan Motor Unit.
25	4	CASSETTE STAND-T	T M30, 39	2(S-11)	(+) < Note 2 >
26	19	RING GUIDE 1	T M40	(S-12)	See, setting condition.
27	19	RING GUIDE 3	T M40	(S-13)	See, setting condition.
28	27, 26, 21, 20	LOADING RING S UNIT	T M30, 40		(+) Align the Hole with punch Mark.
29	28	LOADING DRIVE GEAR-T	T M40	(C-12) < Note 1 >	(+)
30	28	RING GUIDE GEAR-S (2 USED)	T M40		White Colour Gear
31	31	RING LIMITER	T M30, 41	(S-14)	
32	28	LOADING RING T UNIT	T M40, 41		See, setting Condition. Align the Punch Mark with the Notch.
33	31	LOADING IDLE GEAR	T M30, 41		(+) Align the Punch Mark with the Notch.
34	32, 28, 19	RING GUIDE GEAR-T (2 USED)	T M41		(+) Black Color Gear # STOP MODE
35	10	LOADING DRIVE GEAR-S	T M40, 41	(C-13) < Note 1 >	(+)
36	33, 32, 30, 28	RING GUIDE-2	T M40, 41	(S-15)	
37	32, 28, 22, 19, 17	LOADING GUIDE-S UNIT	T M42	3(S-16)	< Note 2 >

List of Abbreviations:
T=Top, B=Bottom,
(R-1)=Retaining Ring (R-1); (P-1)=Spring (P-1); (S-1)=Screw (S-1);
(W-1)=Washer (W-1); 2(S-2)=2 Screws (S-2); (C-1)=Cut Washer (C-1);
(L-1)=Locking Tab (L-1)
(N-1)=Nut (N-1)
(+)=Refer to Exploded Views for Lubrication information

Fig. M29-2

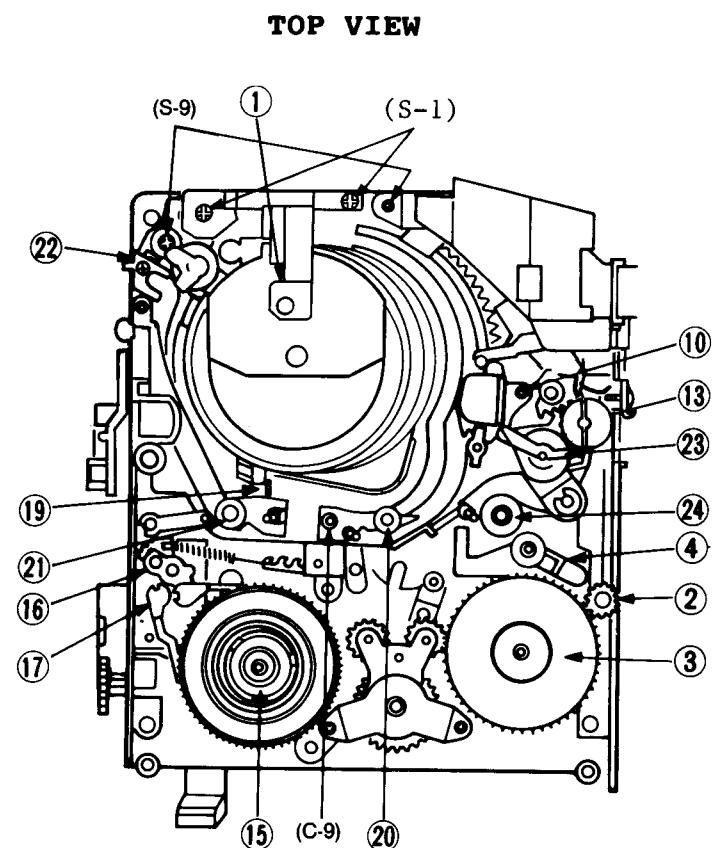


Fig. M30

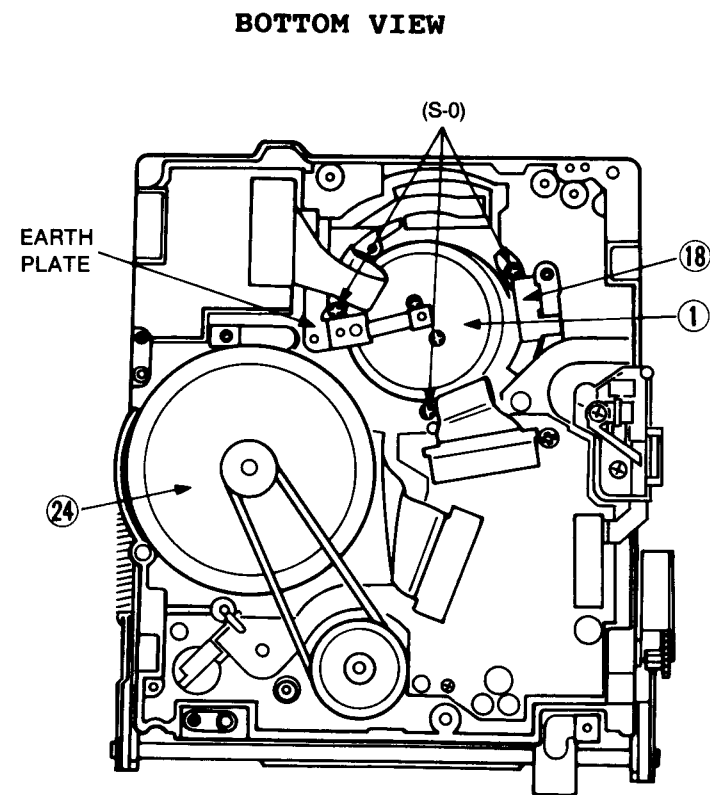


Fig. M31

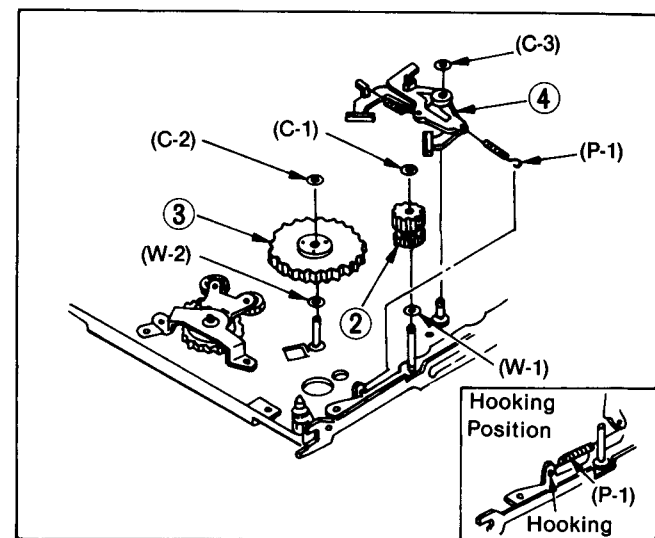


Fig. M32

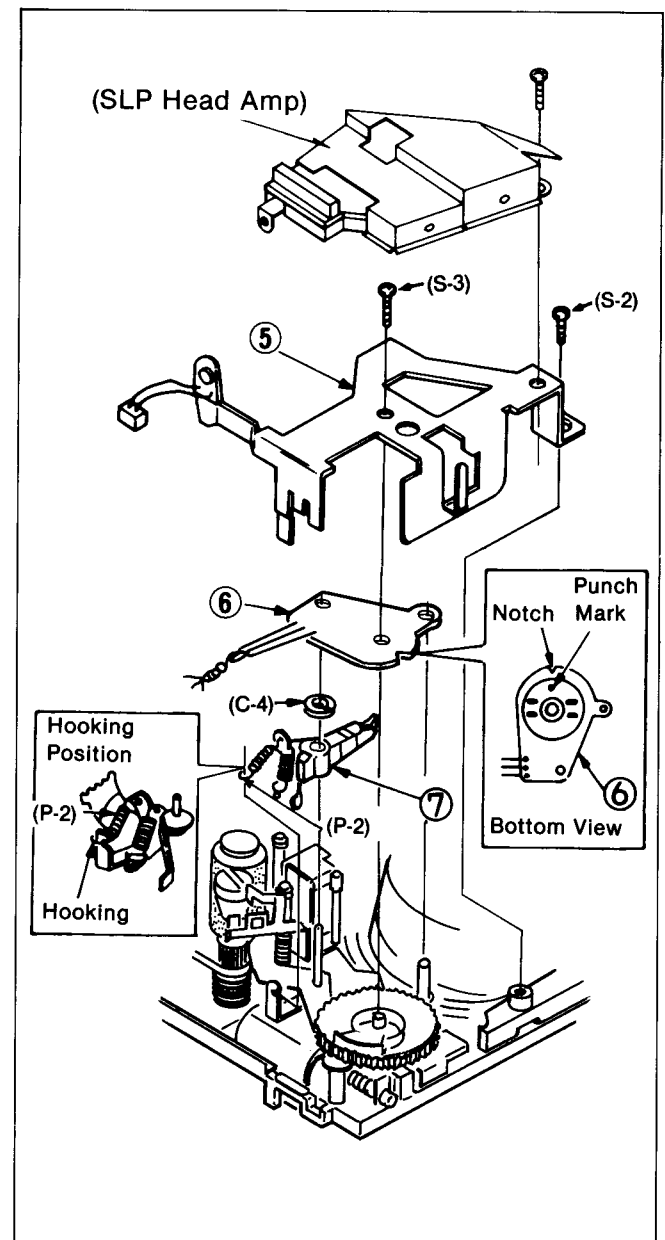
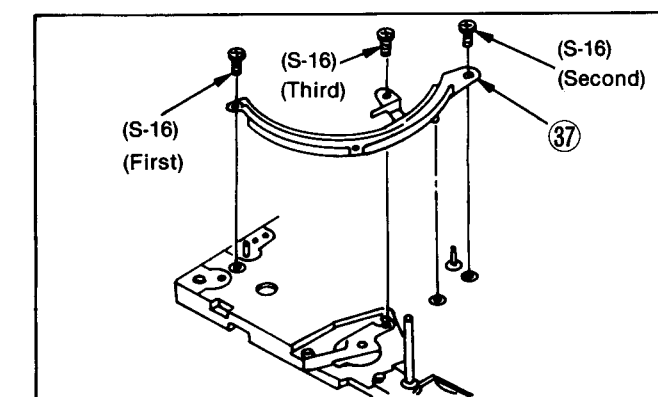
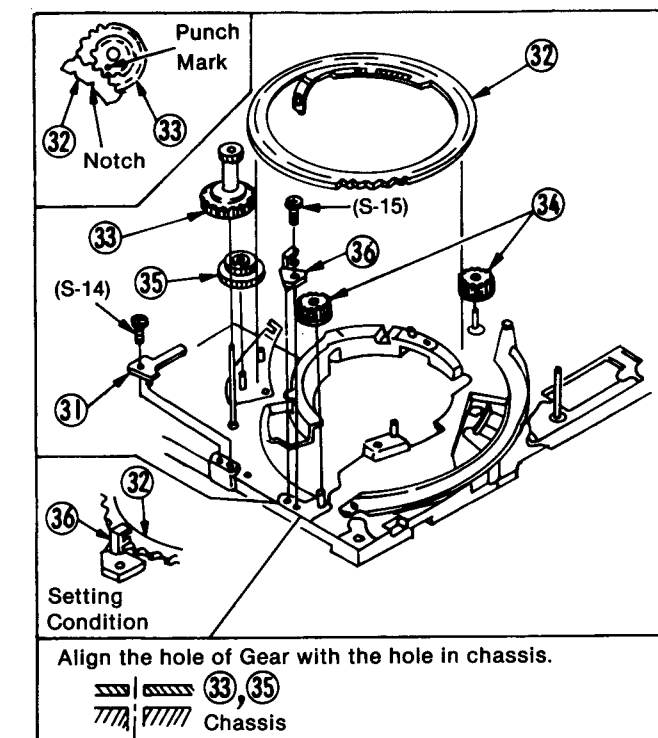
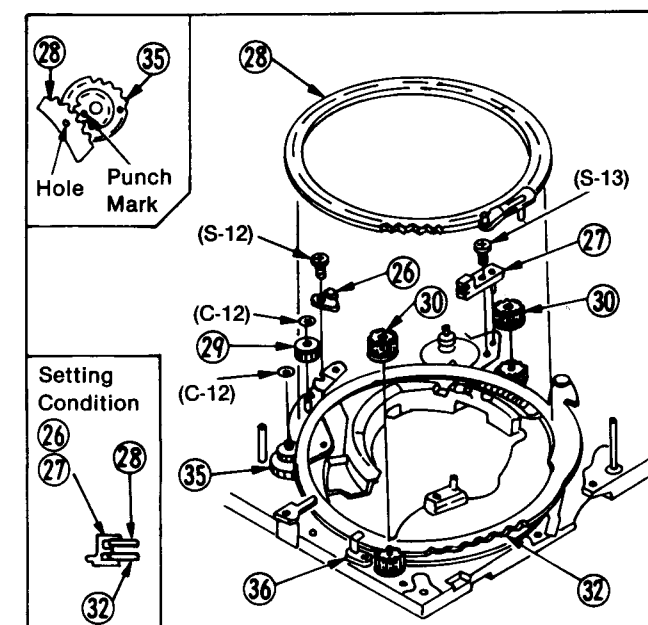
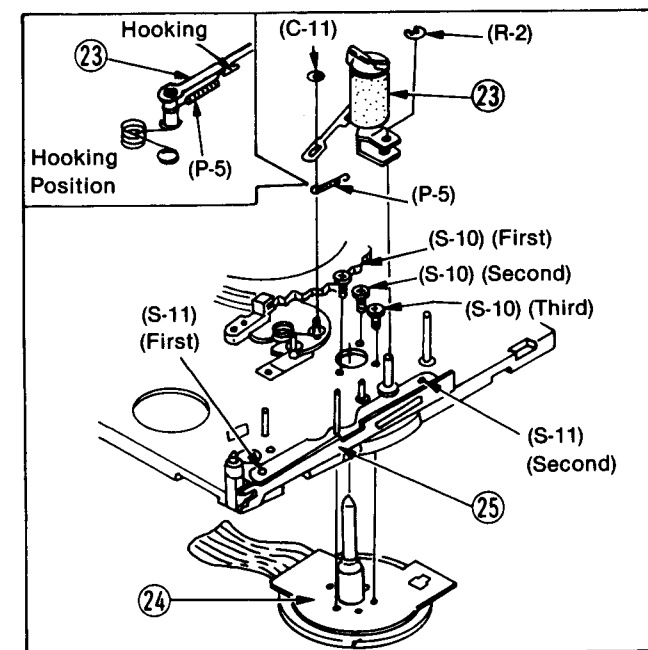
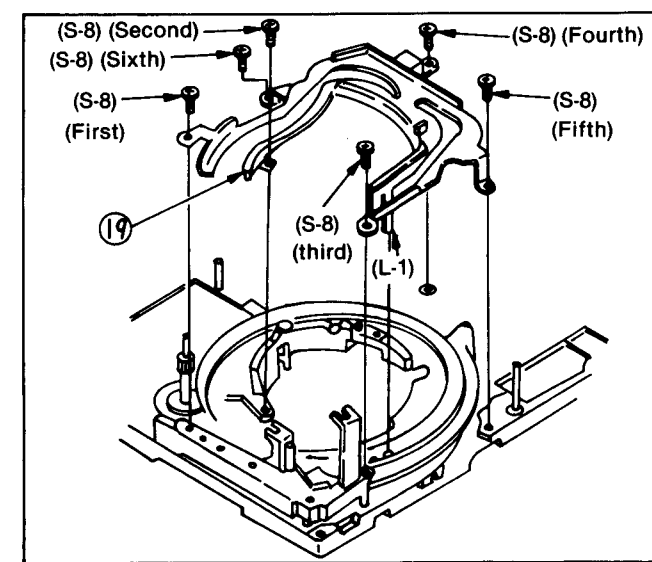
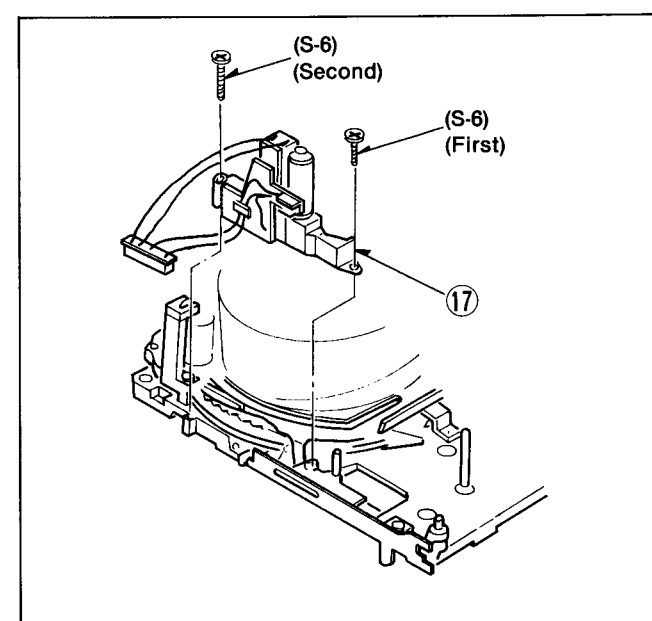
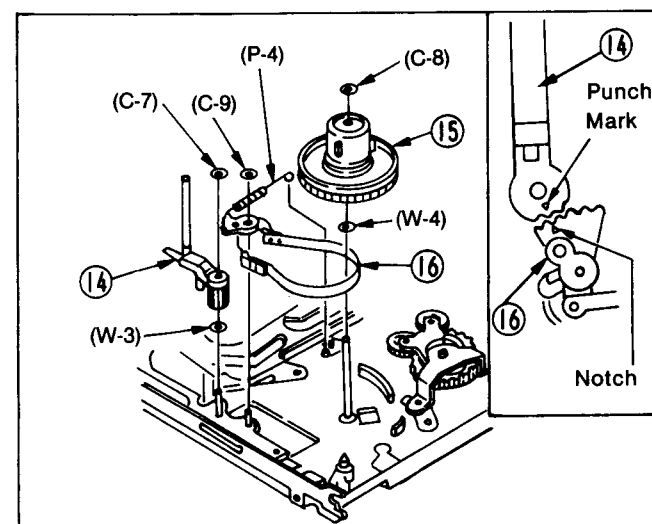
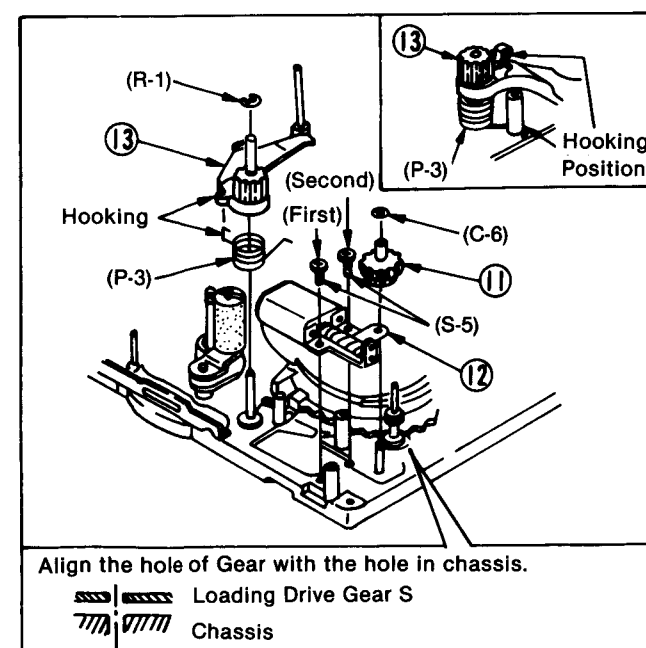
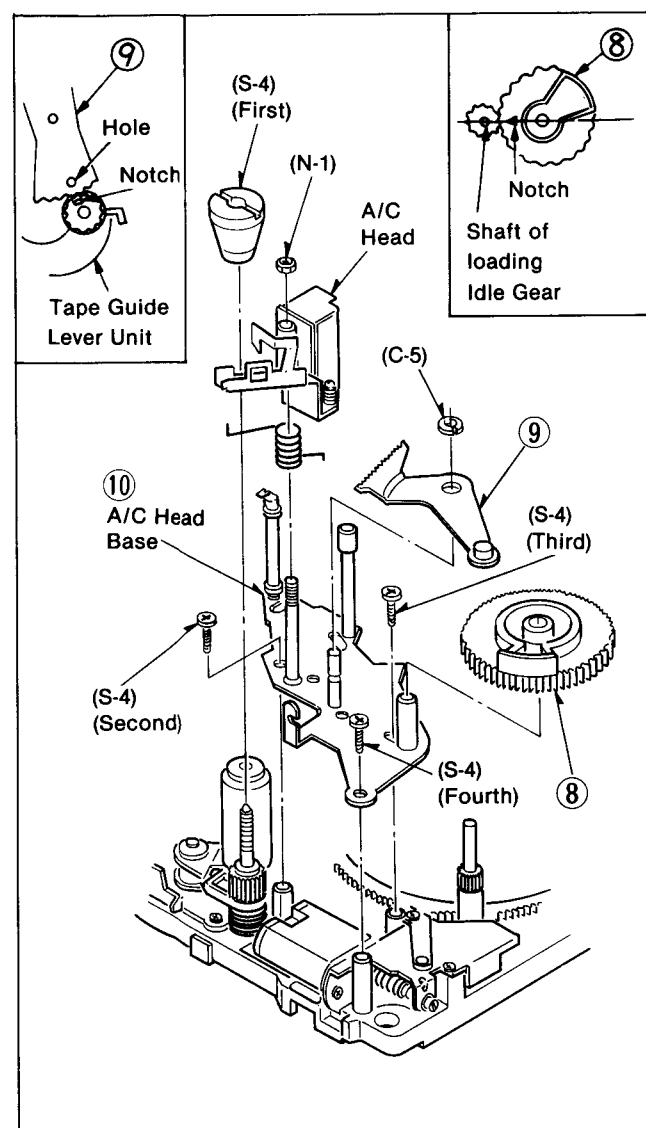


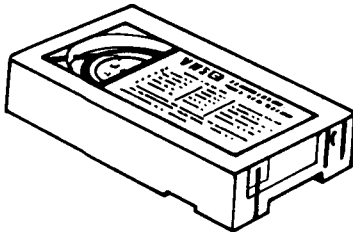
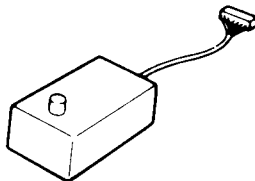
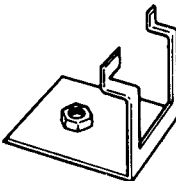
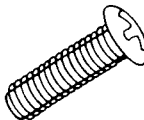
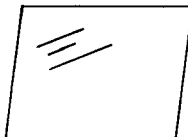
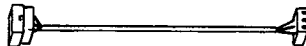
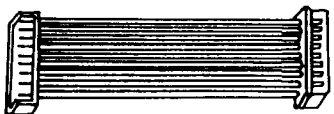
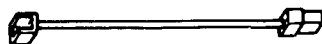
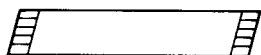
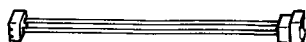
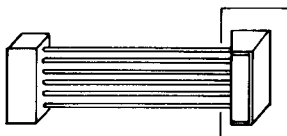
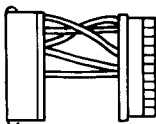
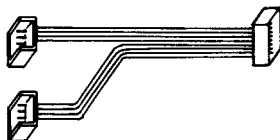
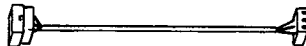
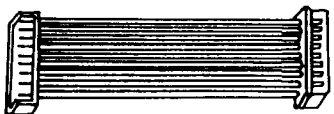
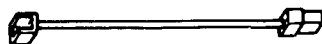
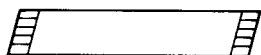
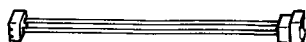
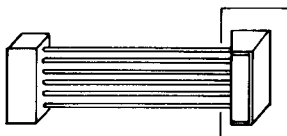
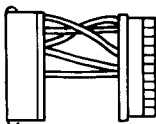
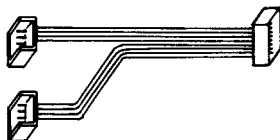
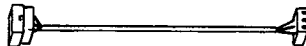
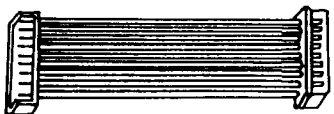
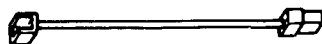
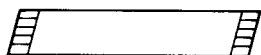
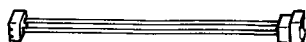
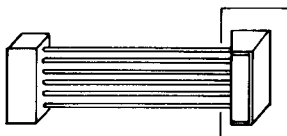
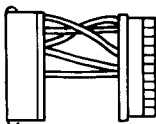
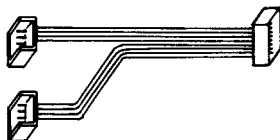
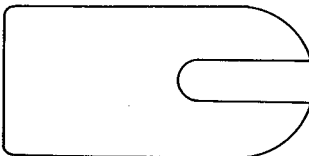
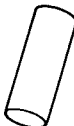
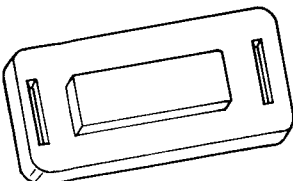
Fig. M33



Reference's <Notes> in Table 7 :

1. This Cut Washer is not reusable. If removed, install a new one.
2. In each figure, tighten the screws in the order indicated in the diagram.
3. Remove the shield cover over the PG Pickup to allow the release of (L-1).

Service Fixtures & Tools

VFMS0002H6C VHS-C Alignment Tape 	VFKS0047 Y/C Separator 	VFK0382 CAMERA HOLDER 															
VFK0431 Camera Holder Arm  (3 pcs) 	VFK0432 Holder Spacer 	XSN26+18 Screw 															
VFK0374 (C12) VFK0375 (C2) VFK0547 (C8)  Colour Temperature Conversion Filter	Extension Cables <table><tr><th>Camera Section</th><th>VTR Section</th></tr><tr><td> VFKS0051 Extension Cable (3 P)  </td><td> VFK0607 Extension Cable (26P)  </td></tr><tr><td> VFKS0052 Extension Cable (6 P)  </td><td> VFK0607 Extension Cable (20P)  </td></tr><tr><td> VFK0430 Extension Cable (14 P)  </td><td> VFKS0060 Extension Cable (2 P)  </td></tr><tr><td> VFK0503 Extension Cable (5 P)  </td><td> VFK0524 Extension Cable (3 P)  </td></tr><tr><td> VFK0380 Extension Cable (18 P)  </td><td> VFKS0074 Connector  </td></tr><tr><td> VFK0497 Extension Cable (6 P)  </td><td></td><td></td></tr></table>		Camera Section	VTR Section	VFKS0051 Extension Cable (3 P) 	VFK0607 Extension Cable (26P) 	VFKS0052 Extension Cable (6 P) 	VFK0607 Extension Cable (20P) 	VFK0430 Extension Cable (14 P) 	VFKS0060 Extension Cable (2 P) 	VFK0503 Extension Cable (5 P) 	VFK0524 Extension Cable (3 P) 	VFK0380 Extension Cable (18 P) 	VFKS0074 Connector 	VFK0497 Extension Cable (6 P) 		
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VFK0430 Extension Cable (14 P) 	VFKS0060 Extension Cable (2 P) 																
VFK0503 Extension Cable (5 P) 	VFK0524 Extension Cable (3 P) 																
VFK0380 Extension Cable (18 P) 	VFKS0074 Connector 																
VFK0497 Extension Cable (6 P) 																	
VMX1304 Clearance Spacer 																	
VMS3504 Alignment Shaft 																	
VKW1049 Diffusion Plate 																	

2-4. ELECTRICAL ADJUSTMENT PROCEDURES

2-4-1. ELECTRICAL ADJUSTMENT FOR CAMERA SECTION

TEST EQUIPMENT AND TOOLS

The following equipment is required for adjustment of the CAMERA section.

1. Vectorscope
2. Oscilloscope
 - *Voltage Range : 0.06~50V/div*
 - *Frequency Range : 0~50MHz*
 - *Probe : 10 : 1 or 1 : 1*
3. VTVM (Vacuum Tube Volt Meter)
 - DVM (Digital Volt Meter)
 - *Voltage Range : 0.01~50V*
4. Frequency Counter
 - *Frequency Range : 0~10MHz*
5. Light Meter
6. Tripod
7. Color Monitor TV (NTSC system)
8. Lighting
 - *140 foot-candles (1400lux), on the chart surface 3200 degrees K.*
9. Reflection Chart
 - *Logarithmic Gray Scale Chart*
 - *Colour Chip Chart*
 - *Ball Chart / J Chart* (Part No. : VFK0580)
 - *Hunting Chart / Gray/White Chart / B/W Chart* (Part No. : VFK0546)
 - *White Chart (Card)* (The white paper is available as a white chart)
 - *Colour Bar Chart* (Part No. : VFKS003B)
10. Plastic Tip Driver
11. Camera Unit Holder (Part No. : VFK0382)
12. Camera Holder Arm (Part No. : VFK0431)

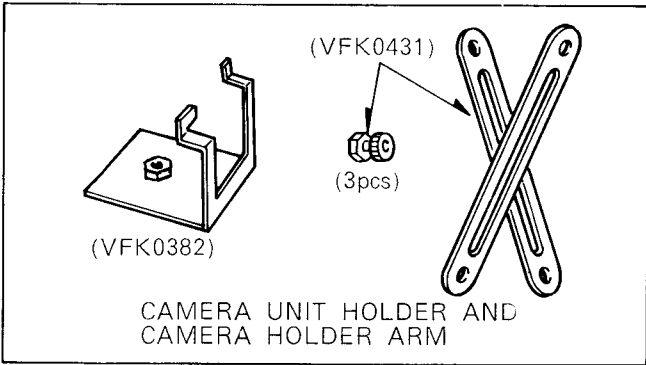


Fig. C1

13. Colour temperature conversion filter
 - *C12 Filter (Part NO. : VFK0374)
 - *C2 Filter (Part NO. : VFK0375)
 - *C8 Filter (Part NO. : VFK0547)

14. Camera Extension Cables
 - *Extension Cable(3P) (Part No.:VFKS0051)
 - *Extension Cable(6P) (Part No.:VFKS0052)
 - *Extension Cable(14P) (Part No.:VFK0430)
 - *Extension Cable(5P) (Part No.:VFK0503)
 - *Extension Cable(18P) (Part No.:VFK0380)
 - *Extension Cable(6P) (Part No.:VFK0497)

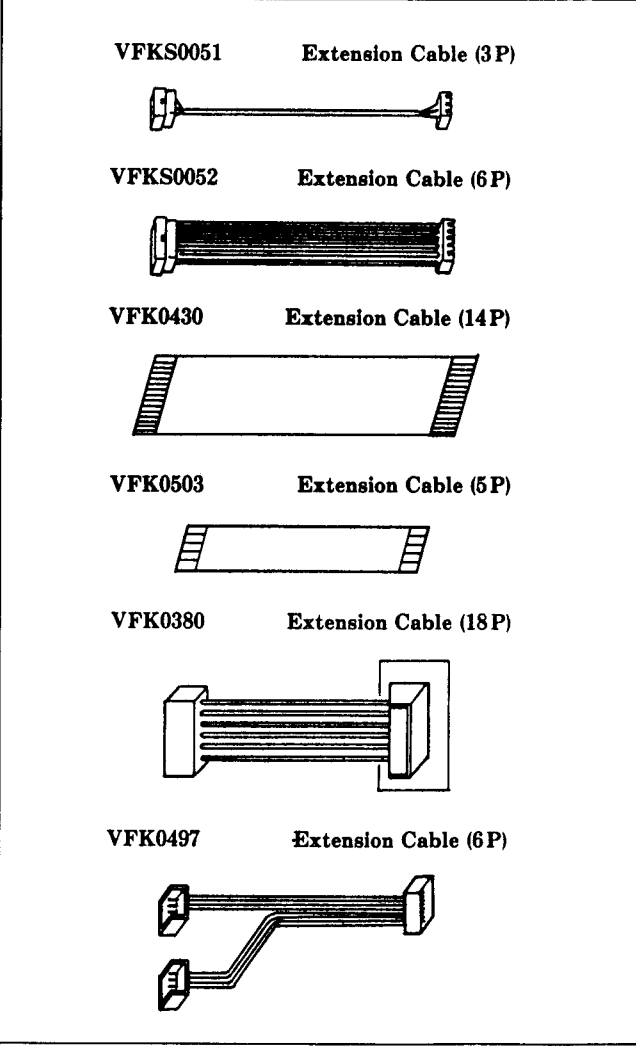


Fig. C2

PREPARATION

1. Remove the Side Case (L) and Side Case (R) from the Unit.
(Refer to the Disassembly Section.)
2. Mount the Camera Unit on the tripod using the Camera Unit Holder (VFK0382) and Camera Holder Arm (VFK0431).
3. Connect the Camera Unit, Video Recorder Unit, AC Adaptor, Camera Operation Unit and Color Monitor TV as shown in Fig. C3.
4. Remove the flexible Cable (Which is connected between FP306 and P1002).
5. Connect the Extension cable (VFK0430) between FP306 and P1002.
6. Set the camera unit to tripod using camera holder (VFK0382) and camera holder arm (VFK0431). (refer to Technical Information).

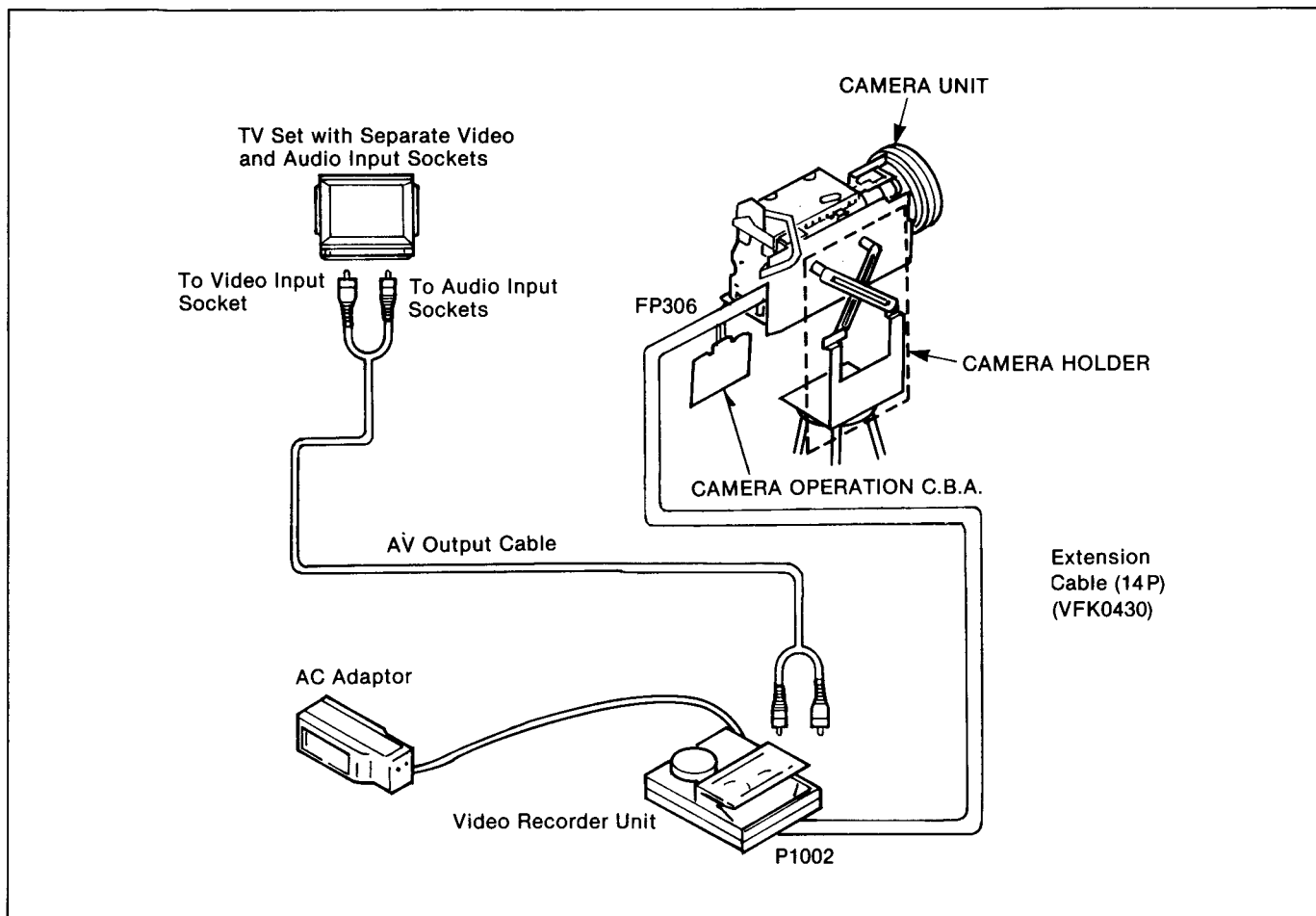


Fig. C3

Note :

<STANDARD SETTING FOR CAMERA ADJUSTMENT>

If there is no switch setting indication in adjustment procedures, set the camera switch as follows :

1. Auto Focus ---- OFF (Manual)
- High Speed Shutter ---- OFF
2. For Trigger ---- FP306-7 (Video Out Terminal)
3. Lighting ---- 3200 degrees kelvin halogen lamp
4. Service work for camera unit must be performed in a dust-free location to maintain lens cleanliness.

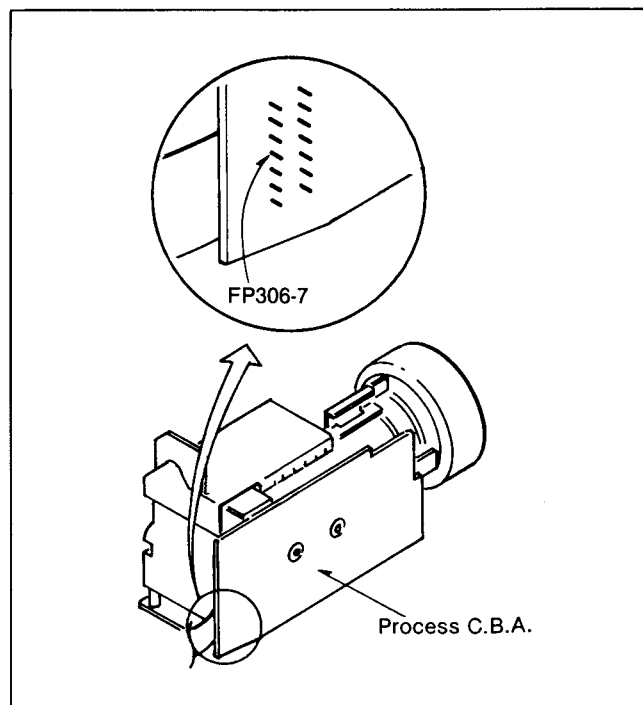


Fig. C4

HOW TO USE CAMERA HOLDER ARM (VFK0431)

Camera Holder Arm (VFK0431) is adjustable the span must be mounted to Camera Holder (VFK0382) and it can be used with 2pcs of Holder spacer (VFK0432) for camera adjustment or checking.

- (A) --- VFK0432 Holder Spacer (2pcs)
- (B) --- VFK0431 Camera Holder Arm
- (C) --- XSN26+18 Screw (2pcs)
- (D) --- VFK0382 Camera Holder

1. Fix the Holder Arm (4) and (5) temporarily by screw (1) as shown in Fig.C5.
2. Mount the Camera Holder Arm (B) to the Camera Holder (D) by screws (2) and (3) as shown in Fig.C6.
3. Tighten the screws (C) with the Holder Spacers (A) as shown in Fig.C5.

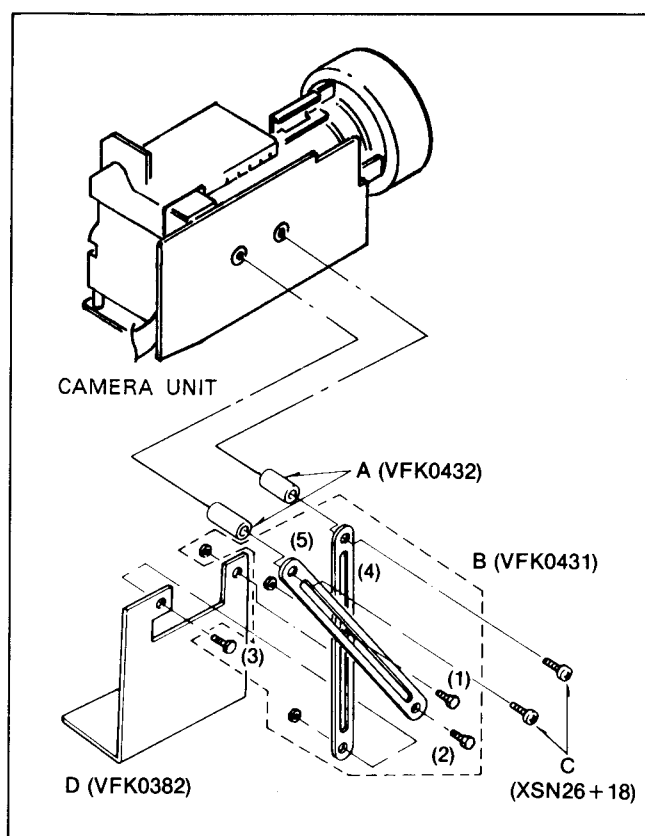


Fig. C5

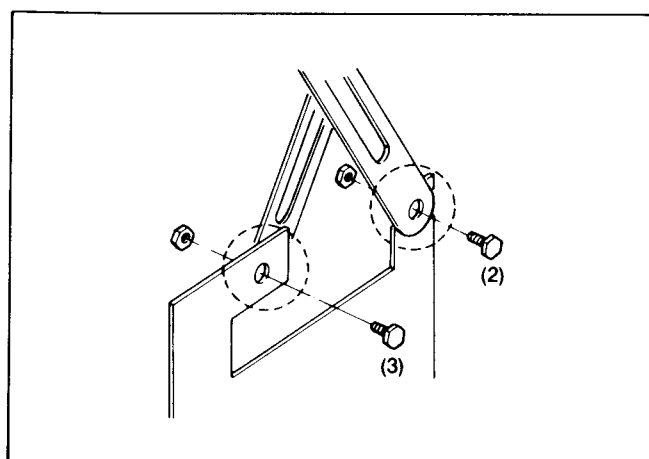


Fig. C6

HOW TO READ THE ADJUSTMENT PROCEDURES

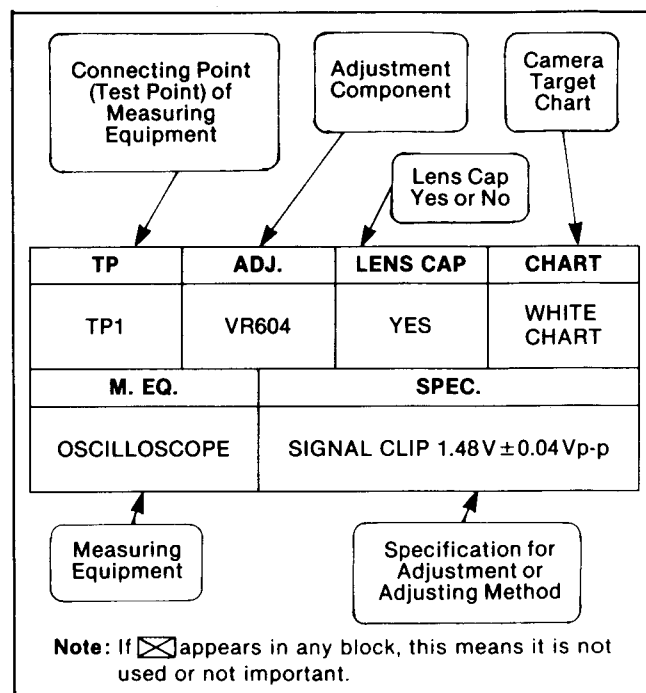


Fig. C7

CCD DRIVE SECTION

1. BACK FOCUS ADJUSTMENT
2. PLL FREQUENCY ADJUSTMENT
3. V-SUB ADJUSTMENT
4. CCD OUTPUT ADJUSTMENT

PROCESS SECTION

5. PEDESTAL LEVEL ADJUSTMENT
6. ALC ADJUSTMENT
7. AGC ADJUSTMENT
8. Y1H/2H DELAY LEVEL ADJUSTMENT
9. YH LEVEL ADJUSTMENT
10. CARRIER BALANCE AND BLACK LEVEL ADJUSTMENT

Ⓐ

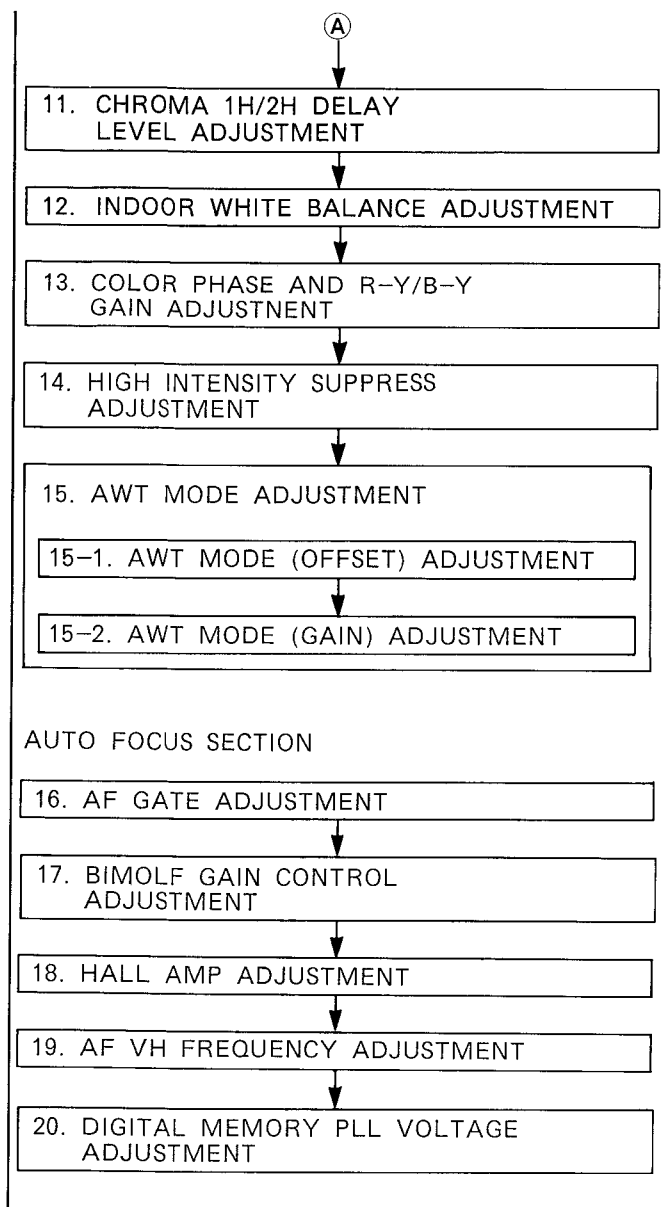


Fig. C8

CCD DRIVE SECTION

1. BACK FOCUS ADJUSTMENT

- (1) Aim the Camera at the Hunting Chart 3m distance and zoom all the way in (Fully tele position.)
- (2) Focus the lens on the object.
- (3) Confirm that Focus-ring indicates 3m.
- (4) Adjust the relay lens adjustment point as shown in Fig. C9.

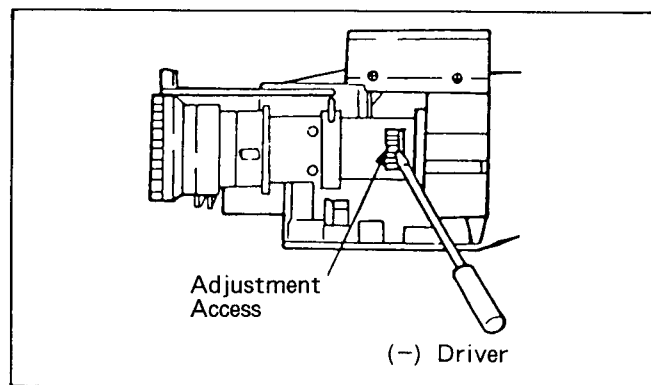


Fig. C9

- (5) Zoom all the way back and adjust the back focus pitch so that the sharpest focus is obtained.
- (6) Repeat the procedure as follows, zoom in, focus, zoom out and adjust until the best focus is obtained over the entire Zoom range.

2. PLL FREQUENCY ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
PIN 7 OF B201	C206		
M. EQ.		SPEC.	
FREQUENCY COUNTER		9.534965MHz±10Hz	

Note:

B201, C206 : Sensor C.B.A.

- (1) Remove the Sensor Shield Case by removing its 2 Screw.

3. V-SUB ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR201	NO	HALOGEN LAMP
M. EQ.		SPEC.	
MONITOR TV		NO BLOOMING	

- (1) Zoom all the way in (Fully tele position) and aim the camera at the Halogen Lamp as shown in Fig. C10.

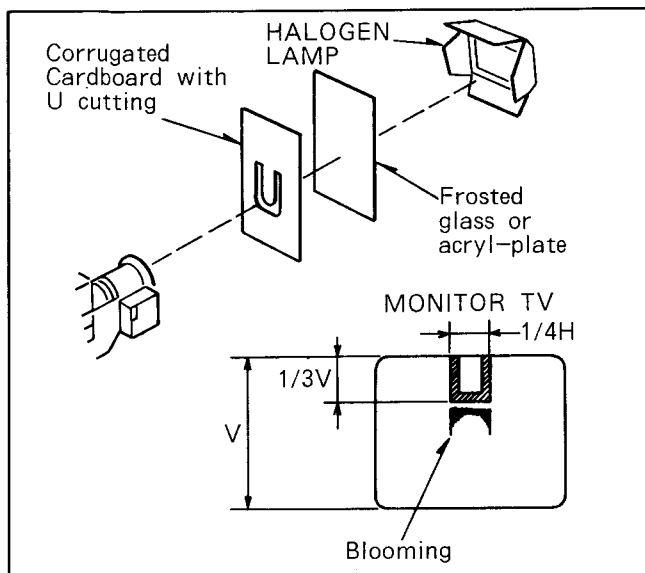


Fig. C10

- (2) Set the High Speed Shutter SW to "OFF" portion.
- (3) Blind the lighting using frosted glass or acryl plate to diffuse incoming light. And also put a corrugated cardboard which inside is cut to "U" shape as shown in Fig. C11.
- (4) Connect the jumper wire between TP516 and TP520 to open the Iris.
- (5) Adjust VR201 so that blooming is just disappear. (If blooming is not disappeared completely, adjust until minimum blooming)
- (6) High Speed Shutter "ON" and "OFF" both mode, confirm that the monitored picture does not contain the Blooming even if the camera moves as shown in Fig. C11.

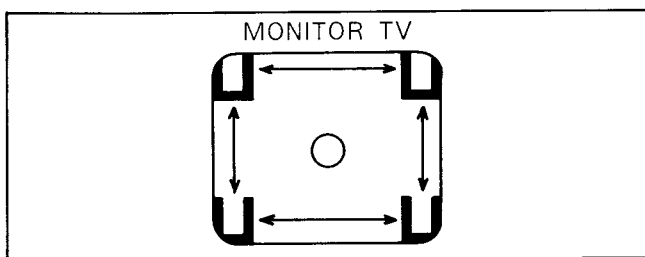


Fig. C11

Note:

- (1) J-chart is also available for rough
- (2) Aim the camera at J chart.
- (3) Set the lens to fully Tele position. And set the distance so that lower 1/3 of J-chart comes to full picture frame of TV
- (4) Connect the jumper wire between TP516 and TP520 to open the Iris.
- (5) Adjust the VR201 so that blooming is just disappeared.

4. CCD OUTPUT ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP201	VR202	NO	J CHART
M. EQ.		SPEC.	
OSCILLOSCOPE		220mV $\pm$ 10mV	

Note:

TP201, VR202 : Sensor C.B.A.
TP515, VR327 : Process C.B.A.

- (1) Aim the camera to J chart.
- (2) Adjust the VR327 (Iris control) so that voltage at TP515 becomes 300mV $\pm$ 10mV.
- (3) Adjust the VR202 (CCD OUT control) so that level "A" becomes 220mV $\pm$ 10mV as shown in Fig C12.

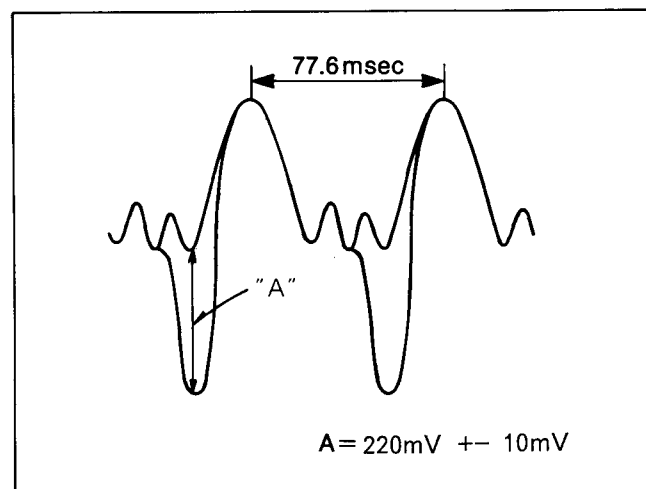


Fig. C12

PROCESS SECTION

5. PEDESTAL LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP514	VR301	YES	
M. EQ.		SPEC.	
OSCILLOSCOPE		SIGNAL LEVEL EQUALS THE BLANKING (BLANK) LEVEL.	

Note:

TP514, VR301 : Process C.B.A.

- (1) Cover the Camera Lens with the Lens Cap.
- (2) Connect the scope to TP514 and trigger with Pin 7 of FP306 (H-Rate).
- (3) Adjust the Pedestal Level Control (VR301) so that the signal level equals the BLK level as shown in Fig. C13.

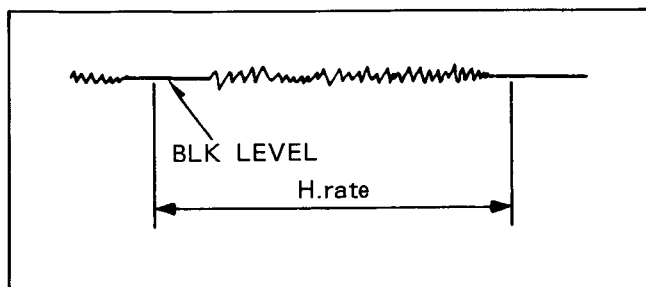


Fig. C13.

6. ALC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP515	VR327	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
OSCILLOSCOPE		0.3V $\pm$ 0.02Vp-p	

Note:

TP515, VR327 : Process C.B.A.

- (1) Aim the camera at the gray scale chart.
- (2) Connect the scope to TP515 and trigger with Pin 7 of FP306 (H-Rate).
- (3) Adjust the Camera Unit to obtain 40usec picture frame as shown in Fig. C14.
- (4) Adjust the Auto Iris Control (VR327) so that the signal level is 0.3V $\pm$ 0.02Vp-p.

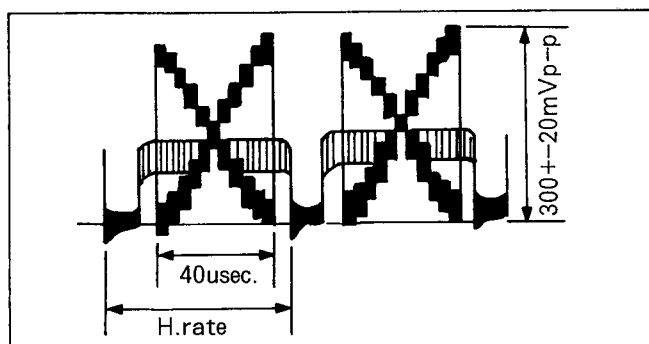


Fig. C14

7. AGC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP514	VR324	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
OSCILLOSCOPE		0.30V $\pm$ 0.02Vp-p	

Note:

TP514, VR324 : Process C.B.A.

- (1) Aim the camera at the gray scale chart.
- (2) Connect the scope to TP514 and trigger with Pin 7 of FP306 (H-Rate).
- (3) Adjust the Camera Unit to obtain 40usec picture frame as shown in Fig. C15.
- (4) Adjust the AGC Control (VR324) so that the signal level is 0.30V $\pm$ 0.02Vp-p.

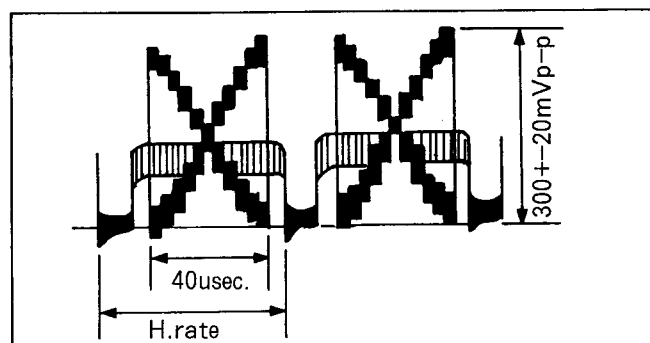


Fig. C15

8. Y1H/2H DELAY LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TS5, TS2, TS8 (TEST ROUND)	VR320 VR318	NO	GRAY SCALE
M. EQ.		SPEC.	
OSCILLOSCOPE		0 $\pm$ 4mVp-p	

Note :

VR320, TS5, TS2, TS8 : PROCESS C.B.A.
(The gain CHA, CHB for oscilloscope should be same)

- (1) Aim the camera at gray scale chart.
- (2) Connect the oscilloscope to TS5 (CHA) and TS2 (CHB).
- (3) Set the CHB for "INVERT" mode.
- (4) Set the oscilloscope for "ADD" mode.
- (5) Adjust the 1H delay level control (VR320) so that waveform becomes 0 $\pm$ 4.5mVp-p as shown in Fig. C16.
- (6) Reconnect the CHB probe to TS8, (CHA is still connecting to TS5, CHB : INVERT mode. oscilloscope : ADD mode.)
- (7) Adjust the 2H delay level control (VR318) so that waveform becomes 0 $\pm$ 4.5mVp-p as shown in Fig. C16.

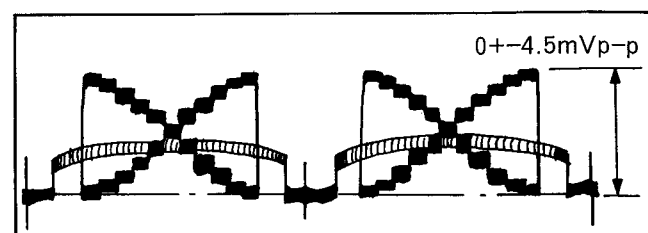


Fig. C16

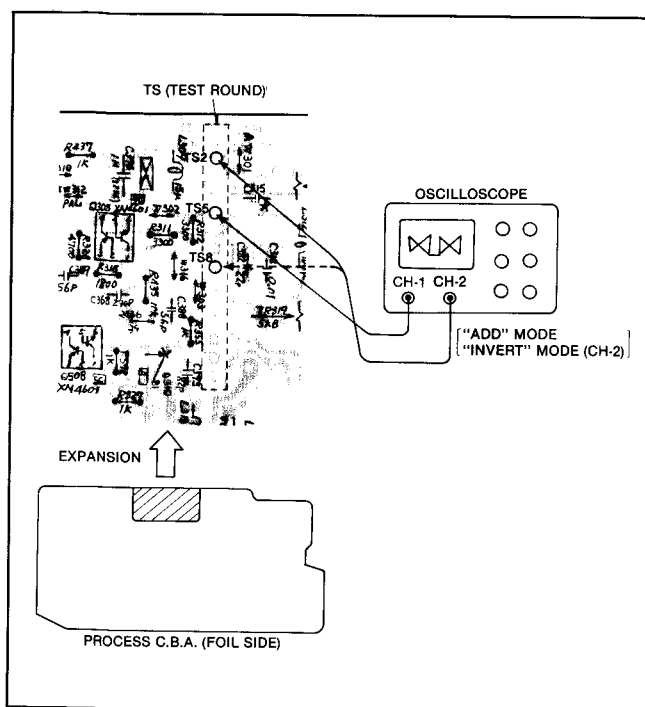


Fig. C17

9. YH LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
PIN 7 OF FP 306	VR315	NO	GRAY SCALE CHART
M. EQ.	SPEC.		
OSCILLOSCOPE	$B/A = 2.5 \pm 0.15$		

Note:

VR315, FP306 : Process C.B.A.

- (1) Aim the camera at the gray scale chart.
- (2) Connect the jumper wire among TP511, TP512 and TP513.
- (3) Connect the scope to pin 7 of FP306. (Refer to Fig. C19)
- (4) Adjust the YH Level Control (VR315) so that the signal level "B/A" is 2.5 ± 0.15 as shown in Fig. C18.
- (5) Disconnect the jumper wire.

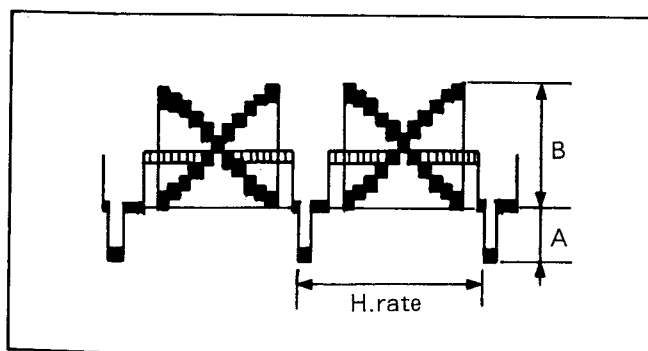


Fig. C18

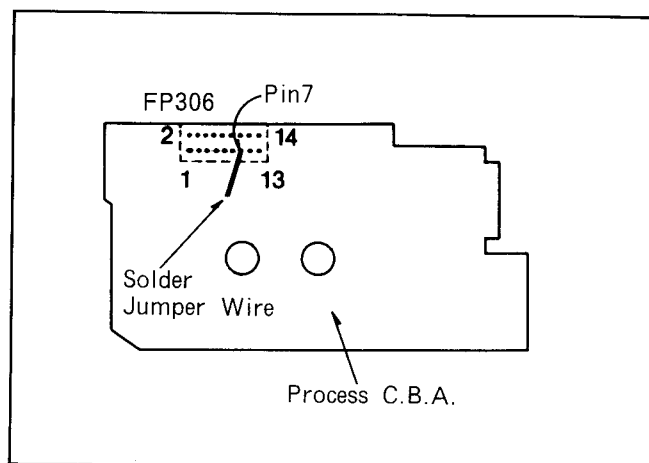


Fig. C19

10. CARRIER BALANCE AND BLACK PEDESTAL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR305 VR306 VR303 VR304	YES	
M. EQ.	SPEC.		
VECTORSCOPE	CENTER OF VECTORSCOPE		
OSCILLOSCOPE	WAVEFORM IS MINIMIZED		

Note:

VR305, VR306, VR303, VR304 : Process C.B.A.
TP511, TP512, TP513, TP522

WITH VECTORSCOPE

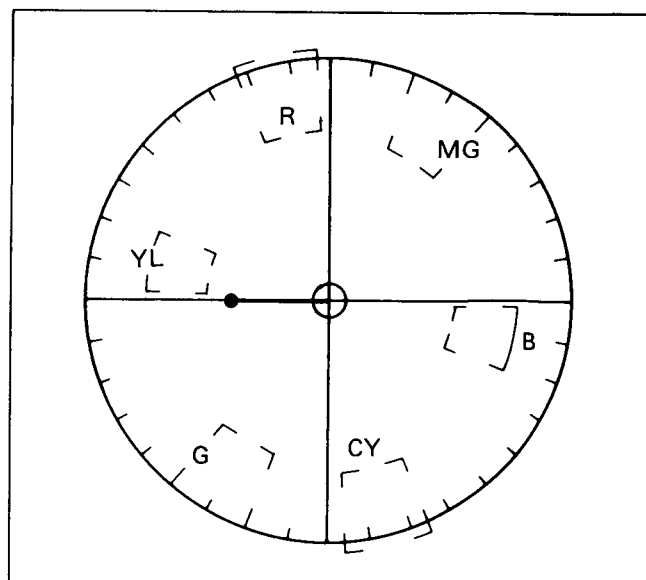


Fig. C20

- (1) Cover the Camera Lens with the Lens Cap.
- (2) Connect the jumper wire among TP511, TP512, and TP513 on process C.B.A. (to cut the feed back line (R-Y,B-Y))
- (3) Connect the jumper wire between TP522 and TP511 to minimize AGC gain.
- (4) Adjust the Black Pedestal Control (VR305, VR306) so that the color vectors at the center of screen on the vectorscope.
- (5) Disconnect the jumper wire only between TP522 and TP511.
- (6) Adjust the Carrier Balance Controls (VR303 and VR304) so that the colour vectors collect at the center of screen on the vectorscope.

WITH OSCILLOSCOPE

- (1) Adjustment condition and procedure are same as using vectorscope.
- (2) Adjust VR305, and VR306, first and Adjust VR303, VR304 next so that the waveform is minimized as shown in Fig. C21.

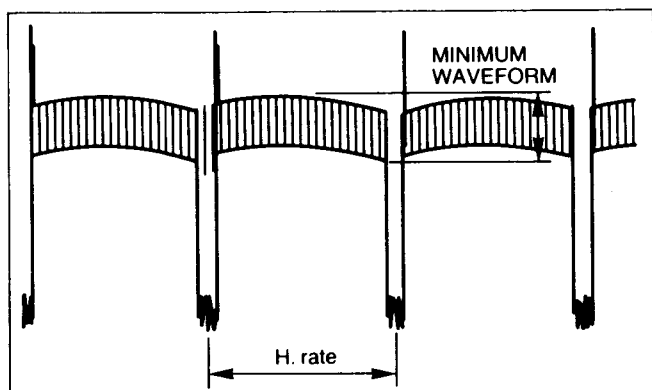


Fig. C21

11. CHROMA 1H/2H DELAY LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TS7, TS10, TS11 (TEST ROUND)	VR319 VR317	YES	
M. EQ.		SPEC.	
OSCILLOSCOPE		0+-4.5mV	

- (1) Cover the camera lens with the lens cap.
- (2) Supply the "WHD" signal(B305-2:process C.B.A) to TS7(test round) through the Buffer circuit and adjust VR1(on Buffer circuit) so that the voltage of TS7(test round) becomes 300mV+-5mV as shown in C22.

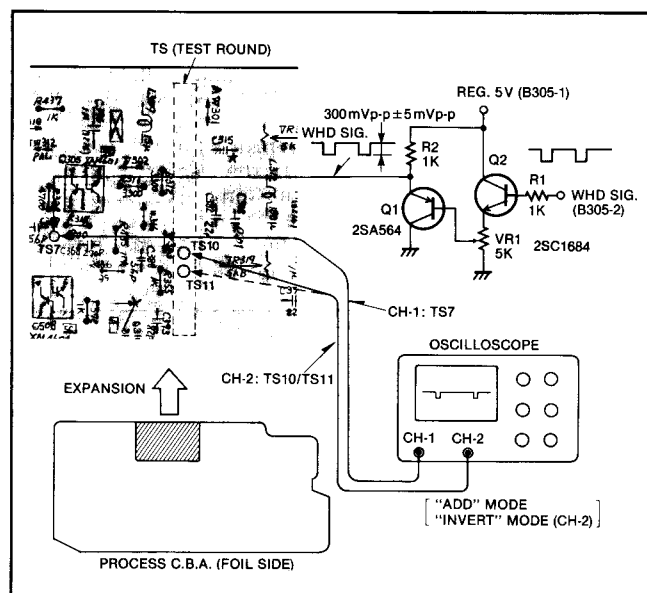


Fig. C22

- (3) Set the oscilloscope to "ADD" mode and "INVERT" mode for CH-2. And connect the oscilloscope CH-1 to TS7(test round) and CH-2 to TS10(test round).
- (4) Adjust VR319 so that the level of waveform becomes 0+-4.5mV as shown in C23.
- (5) Connect the oscilloscope CH-1 to TS7(test round) and CH2 to TS11(test round).
- (6) Adjust VR317 so that the level of waveform becomes 0+-4.5mV as shown in C23.

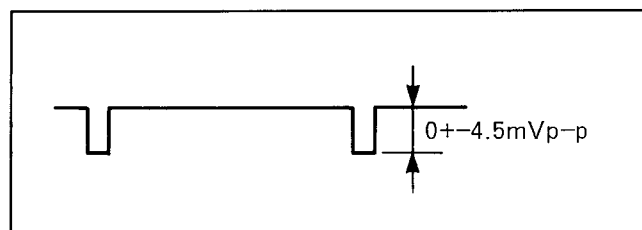


Fig. C23

12. INDOOR WHITE BALANCE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR311 VR312	NO	WHITE CHART
M. EQ.		SPEC.	
VECTORSCOPE		CENTER OF VECTORSCOPE	
OSCILLOSCOPE		WAVEFORM IS MINIMIZED	

Note:

VR311, VR312 : Process C.B.A.

WITH VECTORSCOPE

- (1) Connect the jumper wire among TP511, TP512 and TP513 on process C.B.A. to cut the R-Y, B-Y feed back loop.
- (2) Aim the camera at the White Chart.
- (3) Supply the video signal to the vectorscope.
- (4) Adjust the White Balance Controls (VR311 and VR312) so that the color vectors are collected at the center of screen on the vectorscope as shown in Fig. C24.

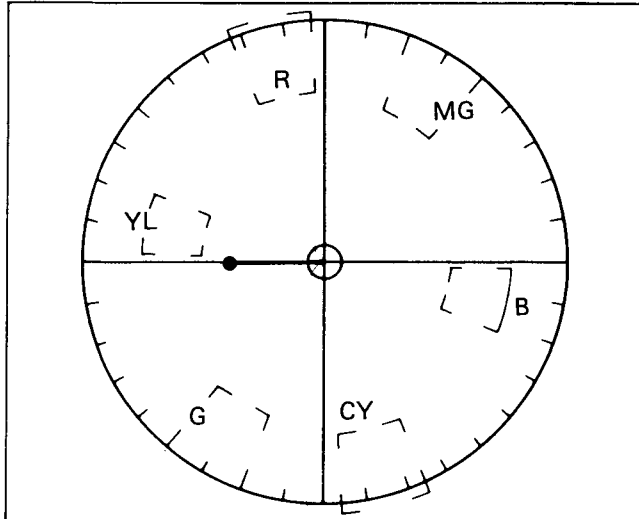


Fig. C24

WITH OSCILLOSCOPE

- (1) Adjustment condition and procedure are same using vectorscope.
- (2) Adjust VR311 and VR312 so that the waveform minimized as shown in Fig C25.

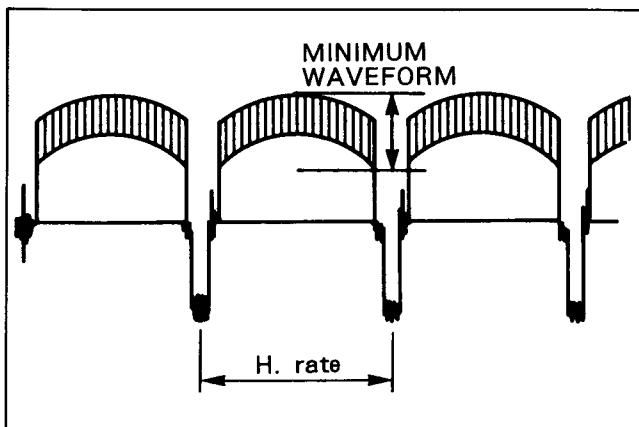


Fig. C25

13. COLOUR PHASE AND R-Y/B-Y GAIN ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR310, VR307, VR314, VR313	NO	COLOUR CHIP CHART
M. EQ.		SPEC.	
VECTORSCOPE		Fig. C26	

Note:

VR310, VR307, VR314, VR313, : Process C.B.A.

- (1) Aim the camera at a Color Chip Chart.
- (2) Connect the jumper wire among TP511, TP512 and TP513 on the Process C.B.A.
- (3) Supply the video signal to the vectorscope.
- (4) Adjust the Color Phase Control (VR307 and VR314), the R-Y Gain Control (VR313) and the B-Y Gain Control (VR310) so that the vector of each color is as shown in Fig. C26.

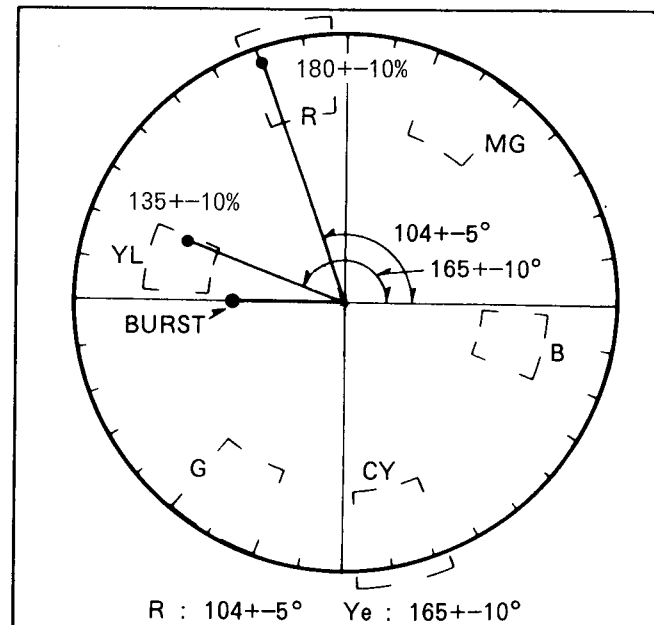
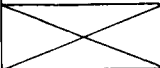


Fig. C26

14. HIGH INTENSITY SUPPRESS (H.C) ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR309	NO	COLOR CHART
M. EQ.		SPEC.	
TV MONITOR		HALF SIZE (YELLOW) YELLOW COLOUR IS JUST BEFORE CUT OFF	

Note:

VR309 : Process C.B.A.

- (1) Connect the jumper wire among TP511, TP512 and TP513 to cut the R-Y, B-Y feed back line.
- (2) Aim the camera at the color chart. (color bar).
- (3) Set the horizontal picture frame (H size) to 40usec, and memorize the level of yellow part.
- (4) Set the horizontal picture frame to 18usec.
- (5) In case that the level of yellow part is more than 50% compared with the yellow level of when horizontal picture frame is 40usec : Adjust the VR309 so that the level of yellow becomes 50% as shown in Fig. C27.
- (6) In case that the level of yellow part is already less than 50% of when the horizontal picture frame is 40usec. Adjust the VR309 until just before yellow part begins to disappear.

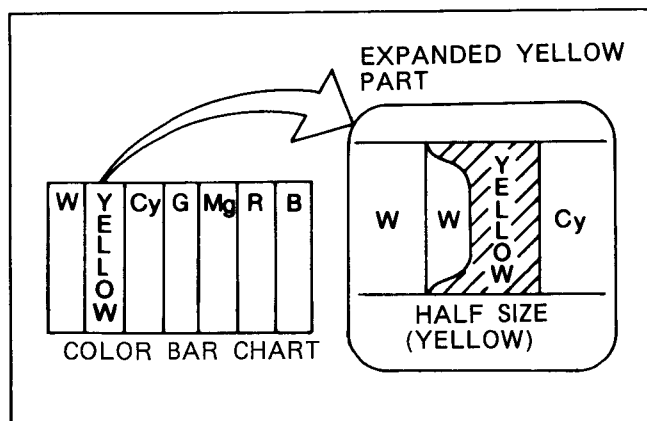


Fig. C27

15-1. AWT MODE (OFFSET) ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR525 VR526	NO	WHITE CHART
M. EQ.		SPEC.	
VECTORSCOPE		CENTER OF VECTORSCOPE	
OSCILLOSCOPE		WAVEFORM IS MINIMIZED	

Note:

VR525, VR526 : Process C.B.A.

WITH VECTORSCOPE

- (1) Set the White Balance Switch to "INDOOR" side.
- (2) Connect the jumper wire among TP511, TP512 and TP513 on process C.B.A. to cut the R-Y, B-Y feed back loop.
- (3) Aim the camera at the White Chart.
- (4) Set the diffusion plate on to surface of AWT sensor and taping around sensor with black tape so that any light is not entered to sensor from the gap between sensor and diffusion plate.
- (5) Adjust the VR525 and VR526 so that the color vectors move to center of screen on vector scope. (Refer to Fig. C28.)

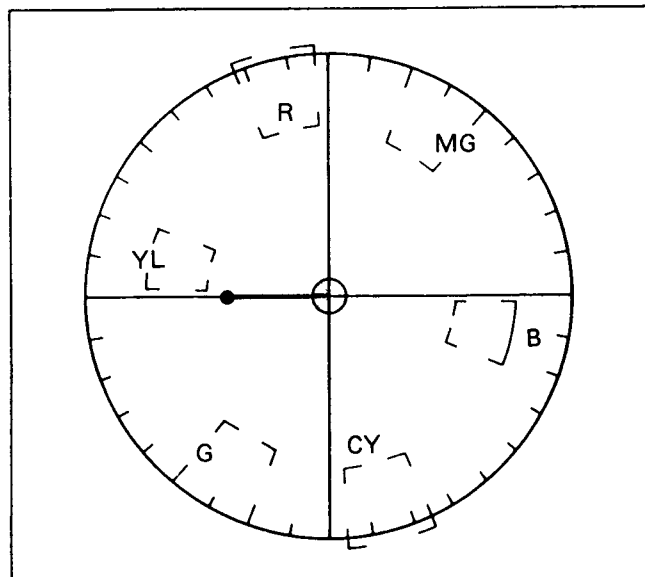


Fig. C28

WITH OSCILLOSCOPE

- (1) Adjustment condition and procedure are same as using vectorscope.
- (2) Adjust VR525 and VR526 so that the waveform minimized as shown in Fig. C29.

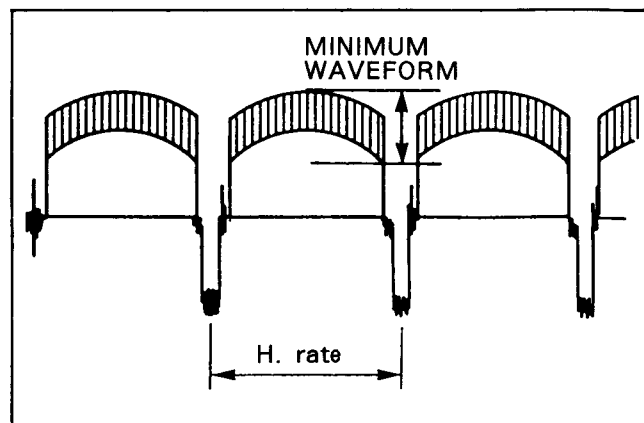


Fig. C29

15-2. AWT MODE (GAIN) ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR523, VR527	NO	WHITE CHART
M. EQ.		SPEC.	
VECTORSCOPE		CENTER OF VECTORSCOPE	
OSCILLOSCOPE		WAVEFORM IS MINIMIZED	

Note:

VR523, VR527 : Process C.B.A.

WITH VECTORSCOPE

- (1) Set the White balance selector for "AUTO" position.
- (2) Aim the camera at the white chart, Lighting should be a 3200 degrees K Halogen lamp.
- (3) Supply the video signal to the vectorscope.
- (4) Attach the diffusion plate (VKW1049) on to surface of AWT sensor and taping around the sensor with black tape so that any light is not entered to sensor from the gap between sensor and diffusion plate.
- (5) Set the color temperature conversion filter (VFK0374) to the fixture as shown in Fig. C30.

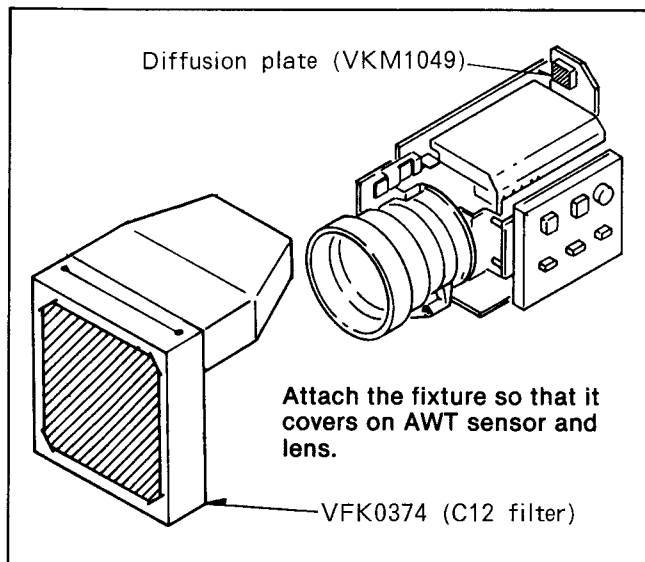


Fig. C30

- (8) Adjust the VR523 and VR527 so that colour vectors collect at center.
- (9) Next, remove the color temperature conversion filter with fixture from the lens. If the color vectors do not collect at center, adjust the AWT offset adjustment controls (VR525, VR526) so that color vectors come to center as shown in Fig. C31.
- (10) Repeat steps (6)–(9).

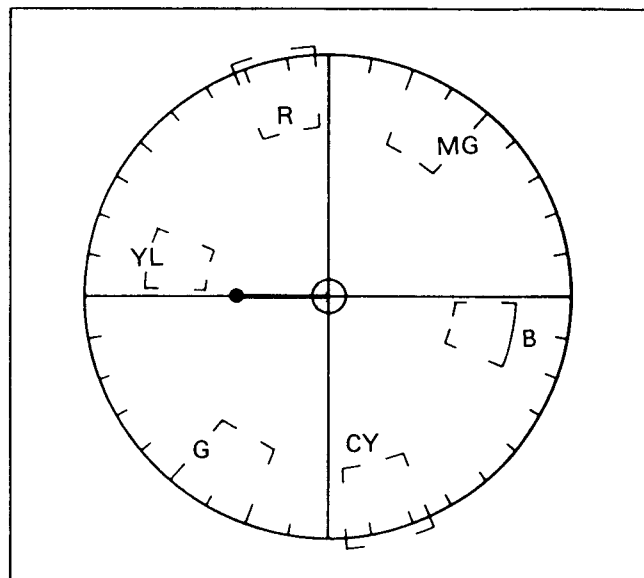


Fig. C31

WITH OSCILLOSCOPE

- (1) Adjustment condition and procedure are same as using vectorscope.
- (2) Adjust VR523 and VR527 so that the waveform is minimized as shown in Fig. C32.

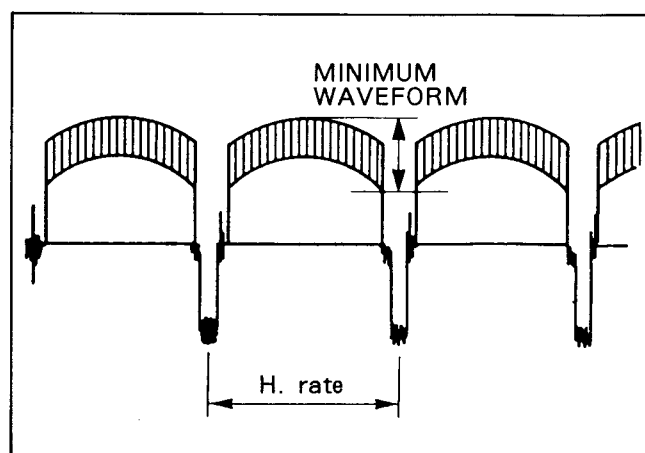


Fig. C32

AUTO FOCUS SECTION

PREPARATION

The following adjustments are for the Auto Focus Circuit.

- (1) Camera zoom is positioned at the end of TELE side.

16. AF GATE ADJUSTMENT

TP	ADJ.	IRIS CAP	CHART
TP702 TP703	C703	NO	
M. EQ.		SPEC.	
OSCILLOSCOPE		$T=9.6\pm0.4\mu\text{-sec.}$	

Note:

TP702, TP703, C703 : AF C.B.A.

- (1) Set the AF Gate Control (C703) as shown in Fig. C33.

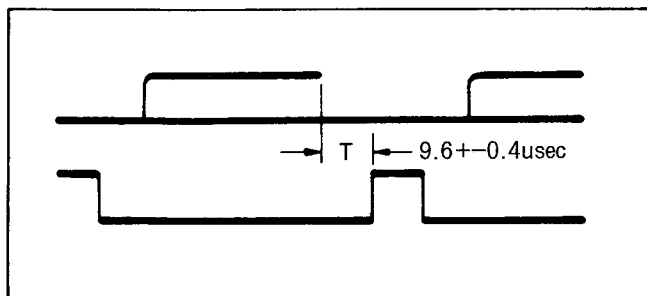


Fig. C33

17. BIMOLF GAIN CONTROL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP704	VR703	YES	
M. EQ.		SPEC.	
OSCILLOSCOPE		$A=11V\pm0.5V_{p-p}$	

Note :

TP704, VR703 : AF C.B.A.

- (1) Set the Focus Switch to the MANUAL position.
- (2) Cover the camera lens with the lens cap.
- (3) Connect the scope to the TP704.
- (4) Adjust the Bimolf Gain Control (VR703) so that the signal level (A) is $11V \pm 0.2V_{p-p}$.

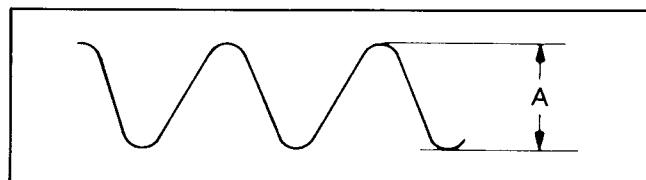


Fig. C34

18. HALL AMP ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP518, TP516 TP520, TP521	VR701 VR702	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
D.V.M.		-----	

Note:

TP516, TP520, TP521 : Process C.B.A.
TP705, VR701, VR702 : AF C.B.A.

- (1) Connect a jumper wire between TP516 and TP521 to close Iris.
- (2) Adjust the HALL AMP Control (VR701) so that the voltage level at TP518 is $1.74\pm0.02V$.
- (3) Disconnect the jumper wire between TP516 and TP521.
- (4) Next, connect a jumper wire between TP516 and TP520 to open the Iris.
- (5) Adjust the HALL AMP Control (VR702) so that the voltage Level of TP518 is $3.72V\pm0.05V$.
- (6) Disconnect the jumper wire between TP516 and TP520.
- (7) Next, confirm the voltage level at TP518 by connecting a jumper wire between TP516 and TP521.
- (8) If the voltage level at TP518 is not $1.74V\pm0.02V$, repeat steps (1)-(6).

19. AF VH FREQUENCY ADJUSTMENT

TP	ADJ.	IRIS CAP	CHART
TP705	C737	NO	WHITE/GRAY CHART
M. EQ.		SPEC.	
OSCILLOSCOPE		$A = 2.80V \pm 0.05V$ DC-RANGE	

Note:

TP705, TP710 : AF C.B.A.
TP516, TP520 : Process C.B.A.
ZOOM : TELE SIDE
Focus : AUTO

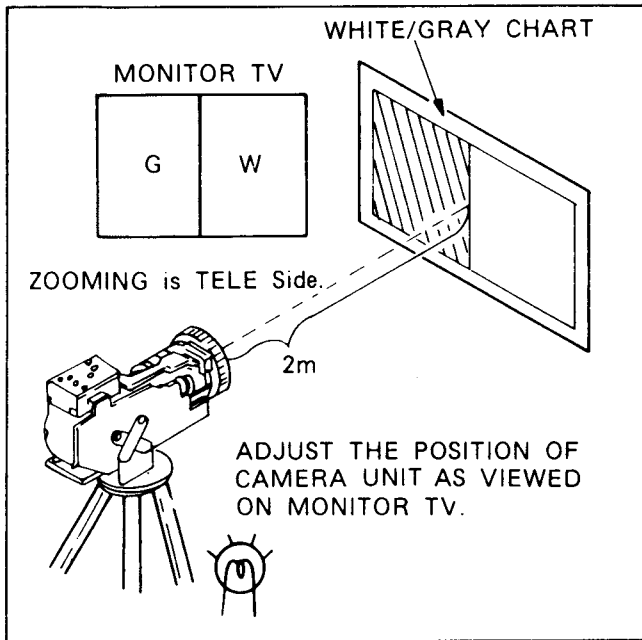


Fig. C35

- (1) Connect a jumper between TP516 and TP520 to open the Iris.
- (2) Aim the camera at the white/gray chart.
- (3) Set the lighting condition so that voltage at TP710 becomes $180\text{mV} \pm 10\text{mVp-p}$ as shown in Fig. C36.

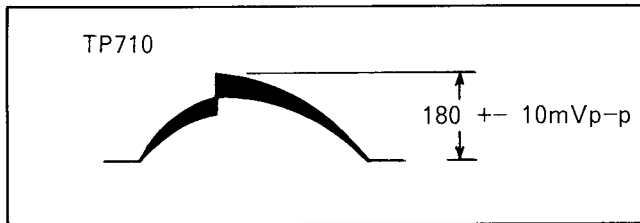


Fig. C36

- (4) Adjust the VH frequency level control (C737) so that DC level at TP705 becomes $2.8\text{V} \pm 0.05\text{V}$ as shown in Fig. C37.

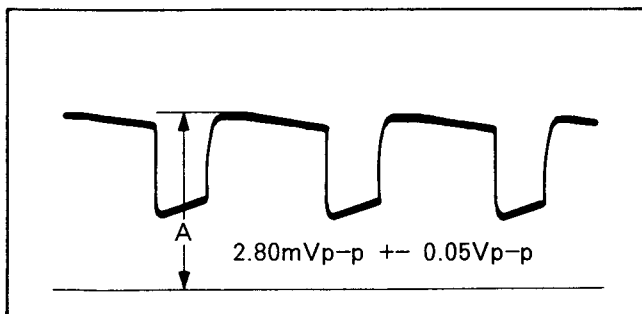


Fig. C37

20. DIGITAL MEMORY PLL VOLTAGE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP101	C120		
M. EQ.		SPEC.	
D.V.M.		$1.5\text{V} \pm 0.1\text{V}$	

- (1) Adjust the C120 so that the voltage level at TP101 is $1.5\text{V} \pm 0.1\text{V}$.

2-4.2. ELECTRICAL ADJUSTMENT FOR E.V.F. SECTION

PREPARATION

The following adjustments are for Electronic Viewfinder.

- (1) Connect the Viewfinder plug to the E.V.F. connector on the unit.
- (2) The camera circuit must be completely aligned before viewfinder adjustments are made.

1. H-OSC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
Pin 1 of P801	VR802	NO	BALL CHART
M. EQ.		SPEC.	
FREQUENCY COUNTER		$16.1 \pm 0.1\text{KHz}$	

Note:

P801, VR802 : E.V.F. C.B.A.

- (1) Connect the frequency counter to Pin 1 of P801.
- (2) Adjust the H-OSC (VR802) so that the frequency is $16.1 \pm 0.1\text{KHz}$.

2. CENTERING ADJUSTMENT

- (1) Aim the camera at the registration chart.
- (2) Adjust the Deflection Yoke Centering Magnets by turning them so that the picture on monitor TV is centered.

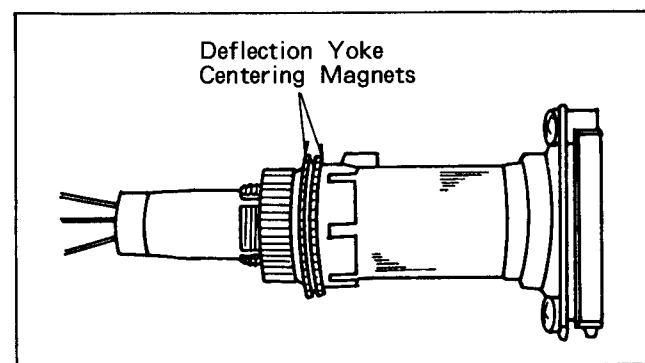


Fig. V1

3. FOCUS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
X	VR803	NO	BALL CHART
M. EQ.		SPEC.	
VIEWFINDER		BEST RESOLUTION	

Note:
VR803 : E.V.F. C.B.A.

- (1) Aim the camera at the Ball chart.
- (2) Adjust the focus control (VR803) for best resolution in the viewfinder.

4. V. SIZE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
X	VR801	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
VIEWFINDER		VERTICAL SIZE IS FIXED.	

Note:
VR801 : E.V.F. C.B.A.

- (1) Aim the camera at the gray scale chart.
- (2) Adjust the Vertical Size (VR801) so the Vertical Size is correct and the picture does not roll as shown in Fig. V2.

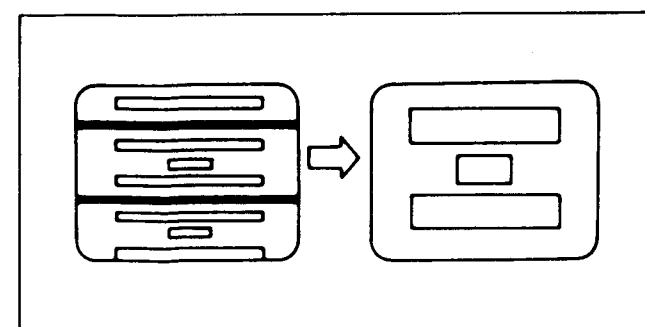


Fig. V2

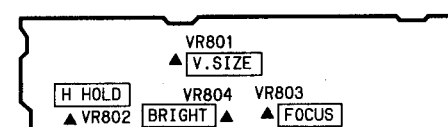
5. BRIGHTNESS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
X	VR804	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
VIEWFINDER		NATURAL GRADATION	

Note:
VR804 : EVF C.B.A.

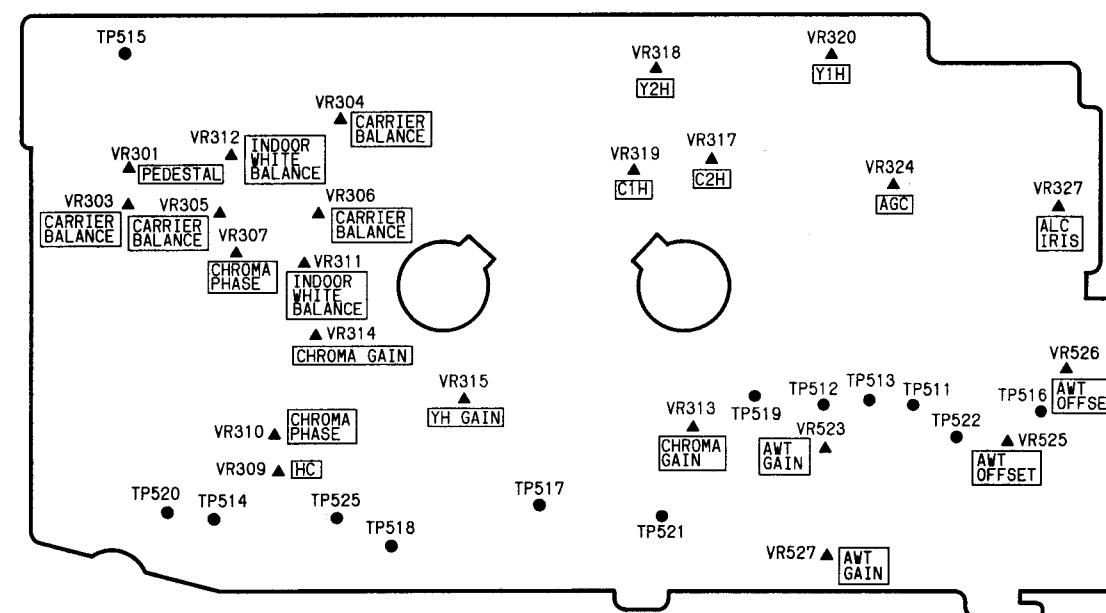
- (1) Aim the camera at gray scale chart.
- (2) Adjust the brightness control (VR804) so that the black and white bars in the EVF screen are the same as they are in the monitor TV screen.

E.V.F. C.B.A.

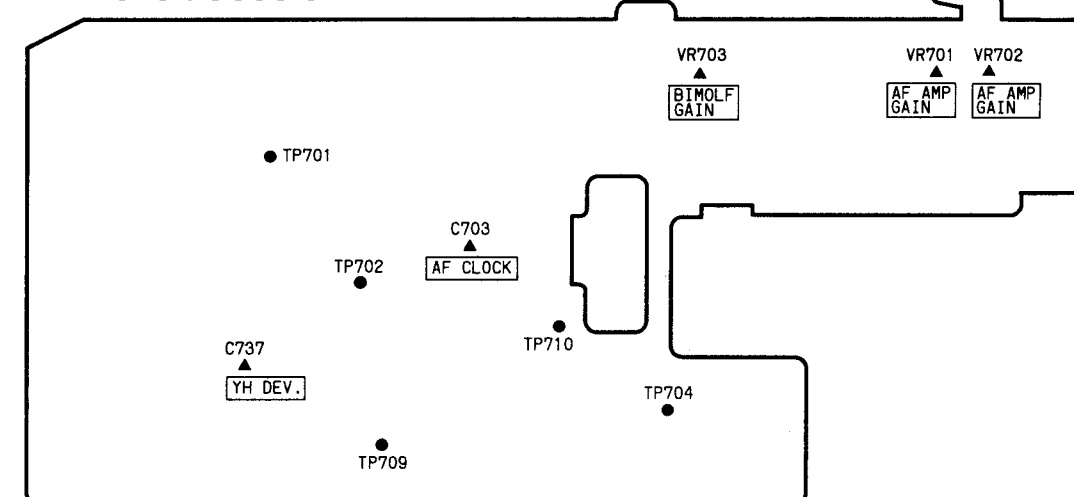


LOCATION OF TEST POINT & CONTROLS (1)

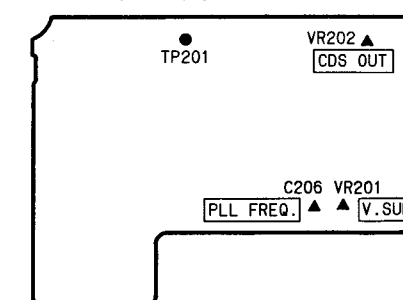
PROCESS C.B.A.



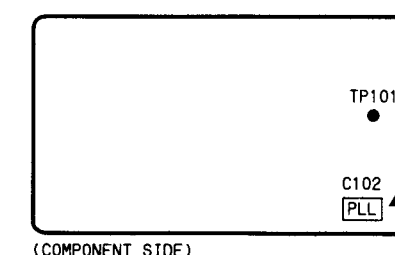
AUTO FOCUS C.B.A.



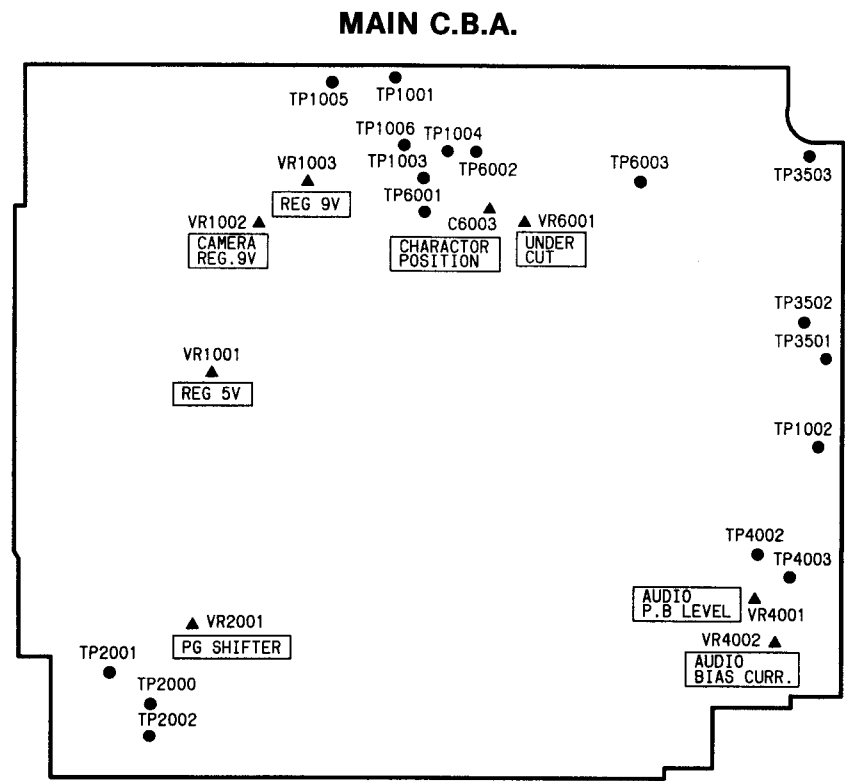
SENSOR C.B.A.



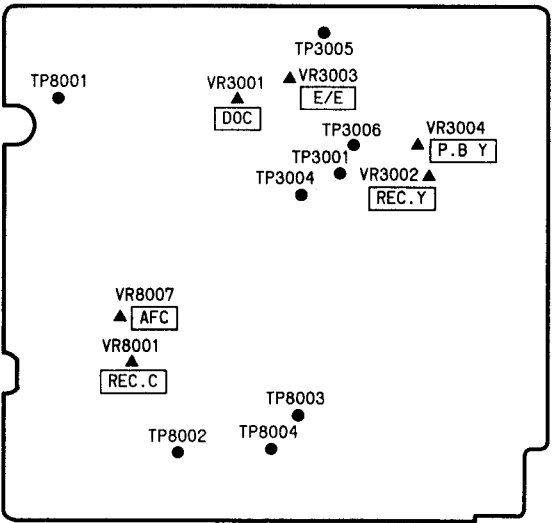
DIGITAL MEMORY C.B.A.



LOCATION OF TEST POINT & CONTROLS (2)



LUMINANCE & CHROMINANCE C.B.A.



2-4.3. ELECTRICAL ADJUSTMENT FOR VTR SECTION

TEST EQUIPMENT AND TOOLS

The following equipment is required for adjustment of the VTR section for VHS-C Movie.

1. VTVM (Vacuum Tube Volt Meter)
DVM (Digital Volt Meter)
Voltage Range : 0.01~50V
2. Dual Trace Oscilloscope
Voltage Range : 0.06~50V/div
Frequency Range : 0~50MHz
Probe : 10:1 or 1:1
3. Frequency counter
Frequency Range : 0~10MHz
4. Signal Generator (Sinewave)
Frequency Range : 0~10MHz
5. Video Sweep Generator
Frequency Range : 0~10MHz
6. Colour Monitor TV (NTSC system)
7. Pattern Generator (NTSC system)
8. VHS-C Alignment Tape (VFMS0002H6C)
9. Y/C Separator (VFKS0047)
10. VHS-C Blank Tape
11. AC Adaptor
12. AV Output Cable

PREPARATION

1. Remove the casing panels.
(Refer to the disassemble method)
2. Connect the Y/C separator (VFKS0047) to the extension cable (VFK0430) with Y/C separator connection cable (VFKS0074) and connect this extension cable (VFK0430) to connector P1002 on Main C.B.A.
3. Supply the video signal to the video circuit by using the Y/C separator (VFKS0047) as shown in Fig. E1.
4. Supply the audio signal to audio circuit through -60dB attenuating circuit as shown in Fig. E9.

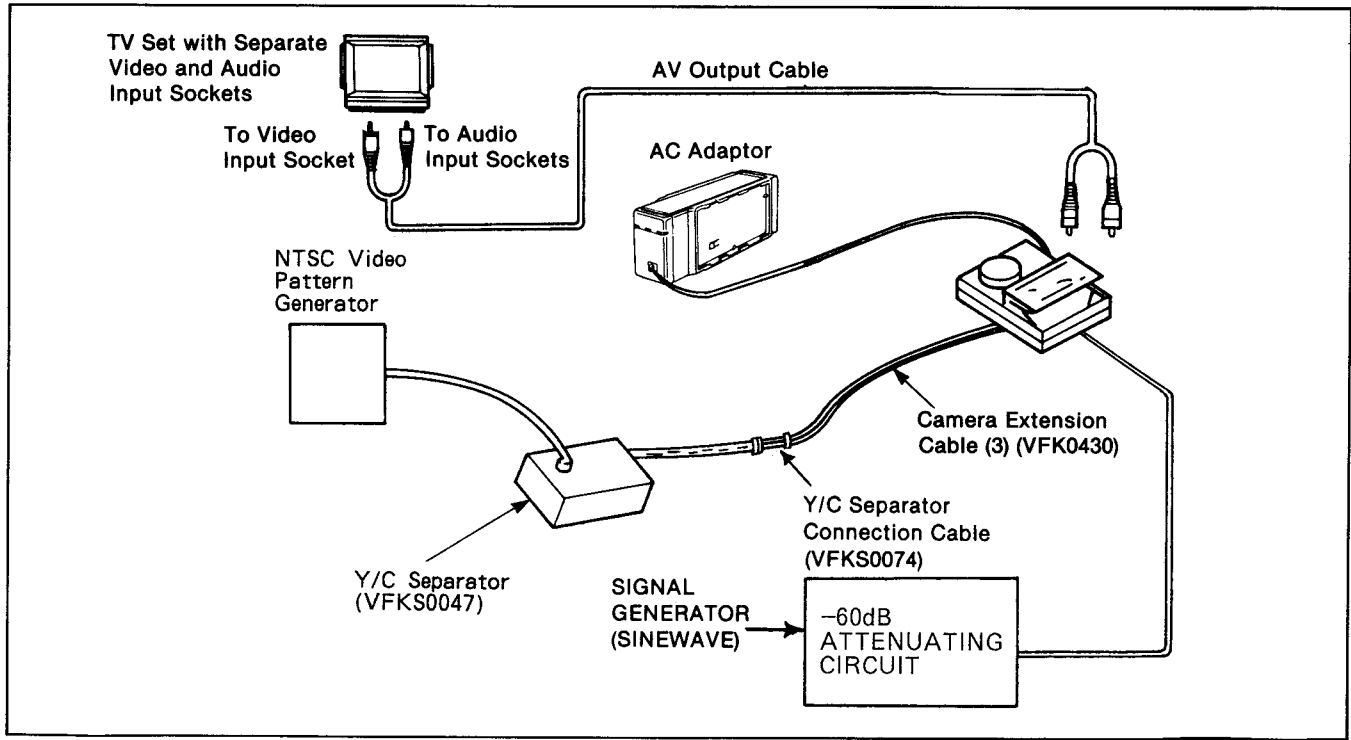
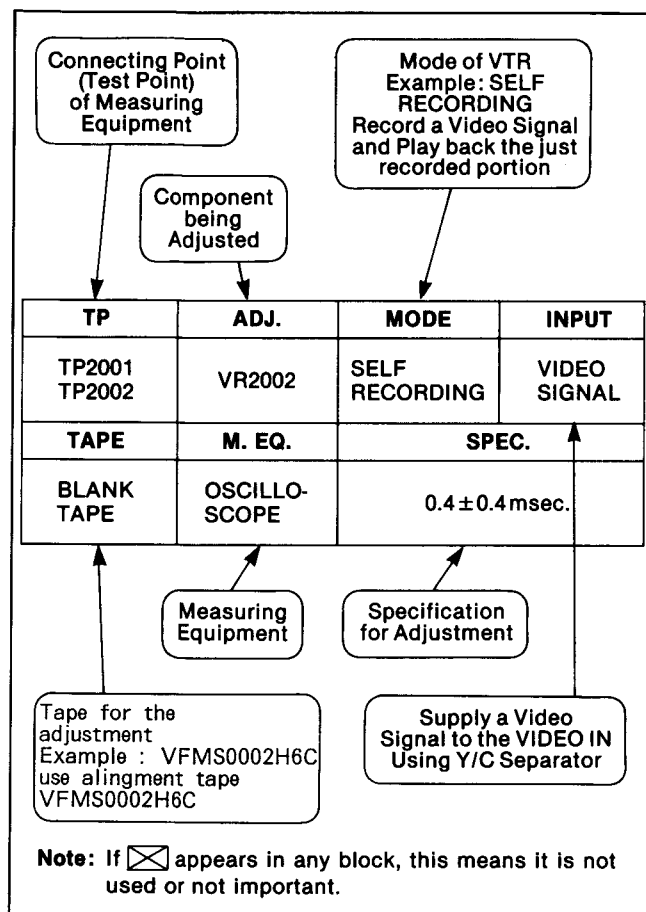


Fig. E1

HOW TO READ THE ADJUSTMENT PROCEDURES



FOR TRIGGERING OF THE OSCILLOSCOPE

To trigger the Oscilloscope, the following test point is used.

H. rate : Video Out

V. rate : TP2001 (Head Switching signal)

Note:

Before the electrical adjustment, set the Unit as following conditions except for especial instructions in each adjustment item.

1. Tape Speed Selector ... SP position.
2. Tracking Control ... Centre FIX position.

POWER SECTION

1. REG. 5V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1001	VR1001	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	4.91±0.025V	

2. REG. 9V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1002	VR1002	CAMERA RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	8.2±0.05V	

3. CAMERA REG. 9V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1003	VR1003	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	8.6 ^{+0.07V} _{-0.03V}	

Note:

This adjustment should be always completed after REG.5V ADJUSTMENT and REG.9V ADJUSTMENT.

4. UNDER CUT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP6001	VR6001	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE/ DC POWER SUPPLY/ D.V.M.		

Note:

Do not connect AC Adaptor, connect a DC Power Supply to pin 3 (+) and pin 2 (-) of P1001, then supply the voltage 8.64 ± 0.05V.

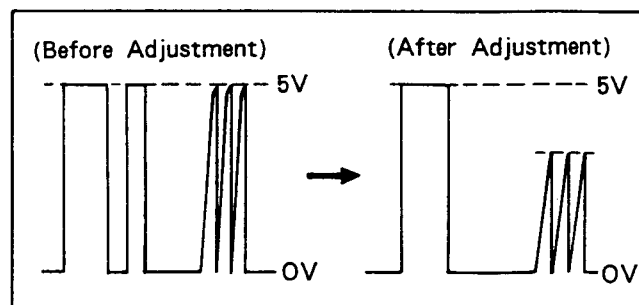


Fig. E2

SERVO SECTION

5. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 VIDEO OUT	VR2001	PLAY	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE (VFMS0002H6C)	OSCILLO- SCOPE	$6.5H \pm 0.5H$	

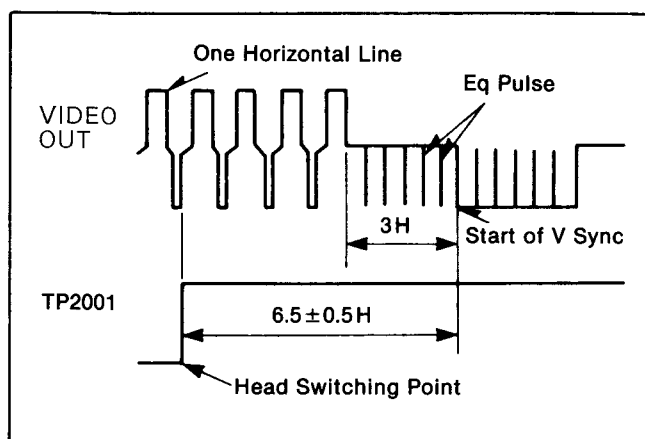


Fig. E3

LUMINANCE & CHROMINANCE SECTION

6. E-E LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3003	STOP	COLOR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO- SCOPE	$A = 1.0 \pm 0.1 V_{p-p}$	

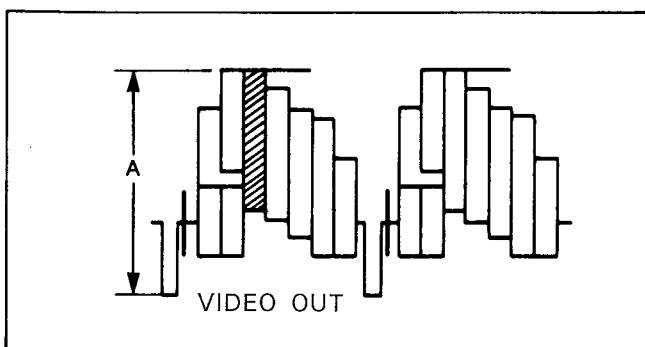


Fig. E4

7. AFC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP8004	VR8007	STOP	
TAPE	M. EQ.	SPEC.	
	FREQ. COUNTER	$625 \pm 15 \text{ kHz}$	

1. Disconnect the connector P1002.
2. Connect the jumper wire among TP8002, TP8003 and TP8001 (GND).
3. Connect the frequency counter to TP8004.
4. Adjust the VR8007 so that frequency becomes $625 \pm 15 \text{ kHz}$.

8. REC CHROMA LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
P5503-1 (HOT) P5503-2 (GND)	VR8001	RECORDING (SLP)	COLOR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	$30 \pm 5 \text{ mV}_{p-p}$	

1. Set the unit to RECORDING with SLP mode.
2. Connect the Oscilloscope to P5503-1 (HOT) and P5503-2 (GND).
3. Eliminate Luminance signal by turning VR3002.
4. Adjust VR8001 so that Chroma level becomes $30 \pm 5 \text{ mV}_{p-p}$.

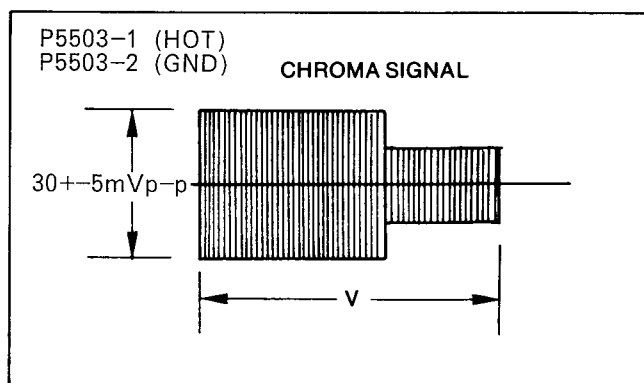


Fig. E5

9. LUMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
P5503-1 (HOT) P5503-2 (GND)	VR3002	RECORDING (SLP)	COLOR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	$120 \text{ mV} \pm 5 \text{ mV}_{p-p}$	

1. Set the unit to RECORDING with SLP mode.
2. Adjust VR3002 to $120\text{mV} \pm 5\text{mV}_{\text{p-p}}$.

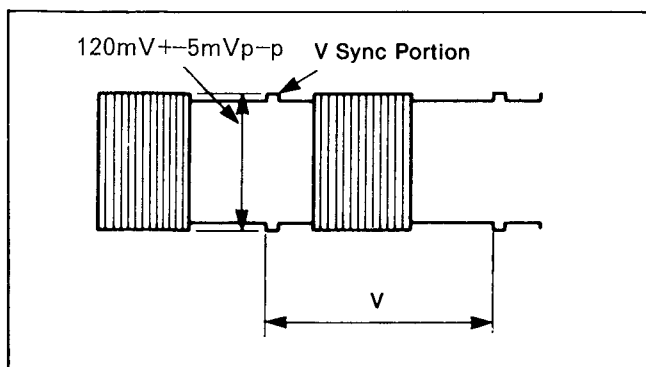


Fig. E6

1. Record the color bar signal.
2. Connect the oscilloscope to VIDEO OUT.
3. Adjust the VR3004 so that level becomes $A = 1.0 \pm 0.05\text{V}_{\text{p-p}}$.

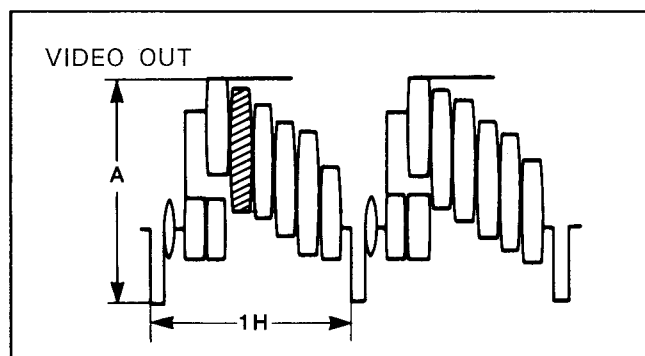


Fig. E8

10. LINE NOISE CANCEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3004	VR3001	SELF RECORDING	COLOR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	"A" = MINIMUM AS POSSIBLE	

1. Record the video signal.
2. Connect the oscilloscope to TP3004.
3. Playback just recorded portion.
4. Adjust VR3001 so that points "A" becomes minimum as possible.

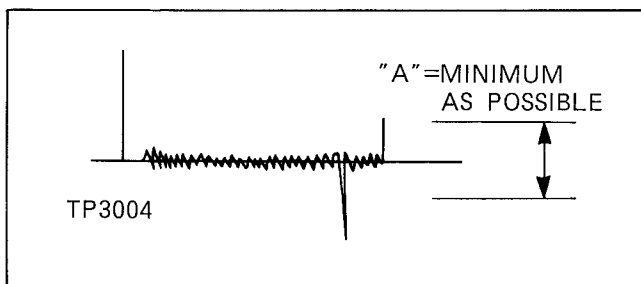


Fig. E7

11. VIDEO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3004	SELF RECORDING	COLOR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	$A = 1.0 \pm 0.05\text{V}_{\text{p-p}}$	

AUDIO SECTION

12. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	$2.7 \pm 0.1\text{mV}_{\text{rms}}$	

13. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
AUDIO OUT	VR4001	SELF RECORDING	1kHz AUDIO 0dB SIGNAL/ VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	SIGNAL GENERATOR/D.V.M.	PB LEVEL = $-8 \pm 1\text{dB}$	

1. Supply the audio signal (1KHz/0dB sine-wave) to audio circuit through -60dB attenuating circuit as shown in Fig. E9.
2. Adjust VR4001 so that the Playback level becomes $-8 \pm 1\text{dB}$.

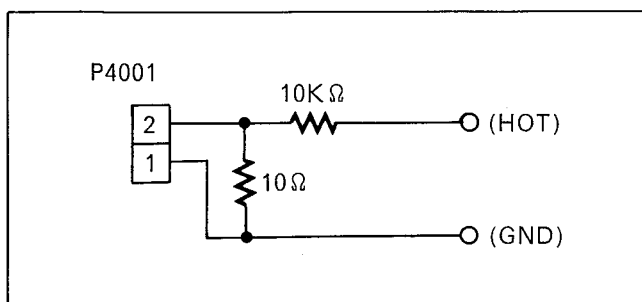


Fig. E9

SYSTEM CONTROL SECTION

14. CHARACTER POSITION ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIEW FINDER	C6003	STOP	
TAPE	M. EQ.	SPEC.	
		CHARACTER IS CENTER	

1. Connect the EVF unit to the VTR unit.
2. Display the battery remaining indicator and counter number on the EVF.
3. Adjust the C6003 (osc control) so that the character comes to the center of View Finder.

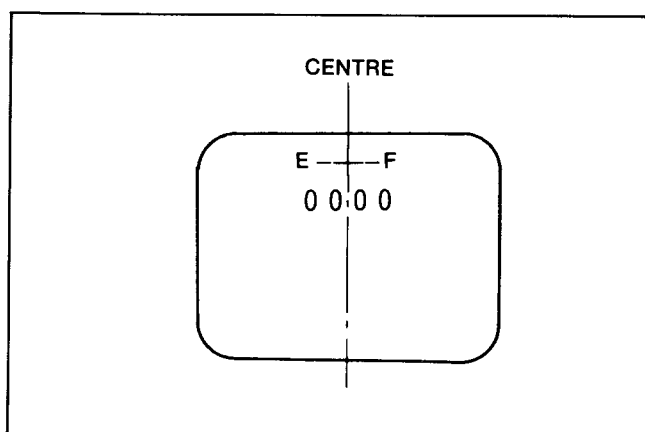


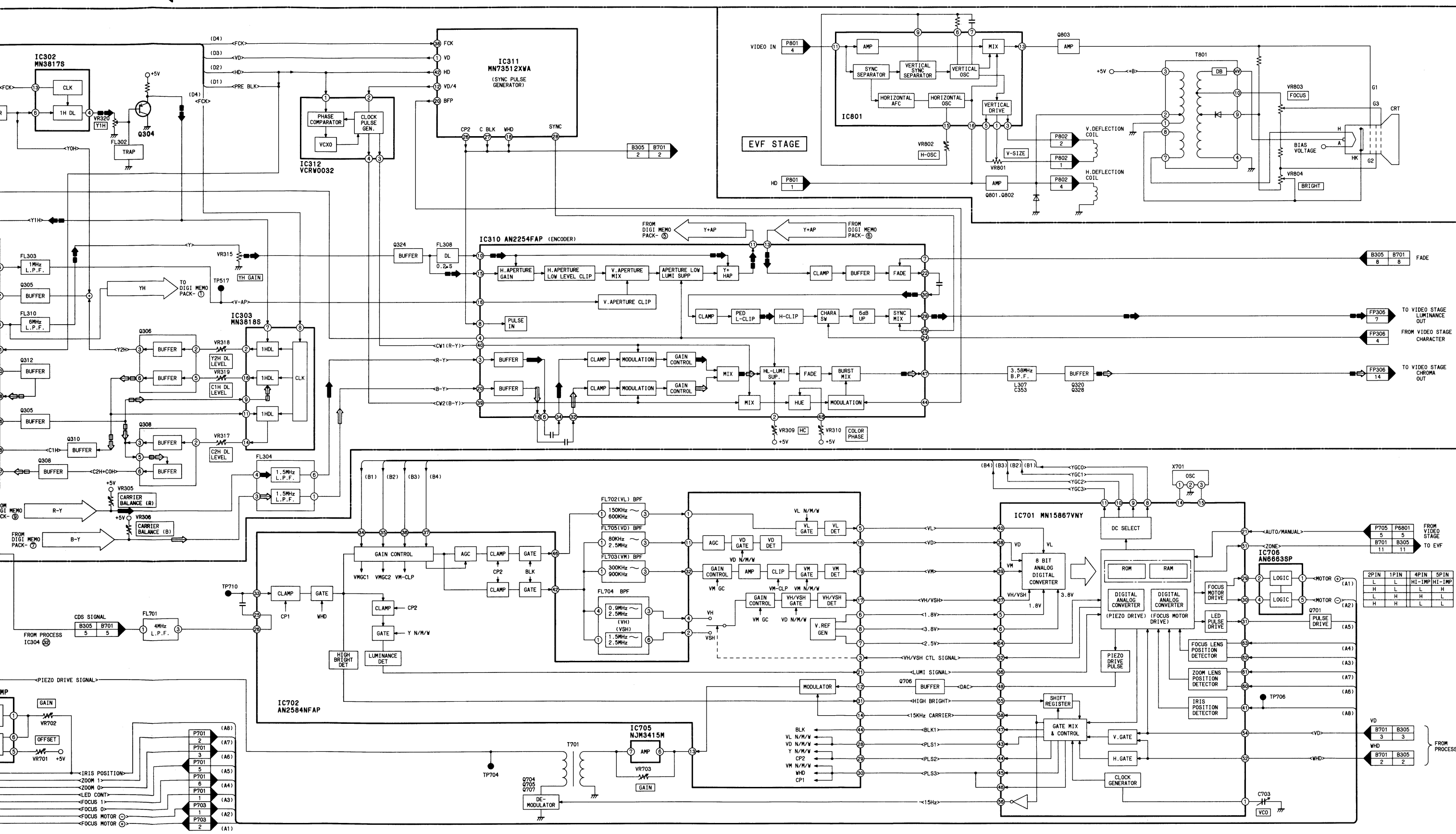
Fig. E10

3-1. CAMERA STAGE BLOCK DIAGRAM

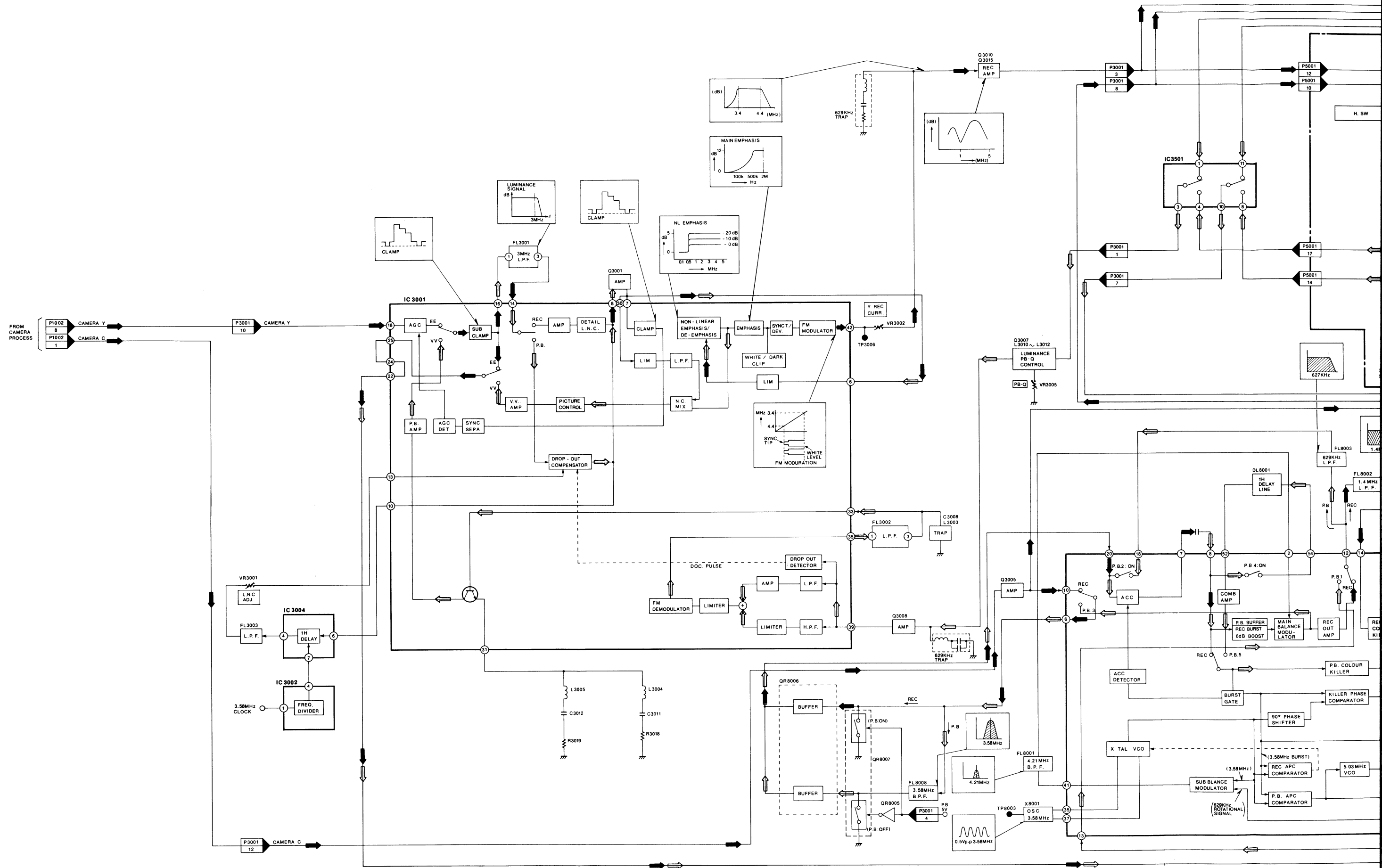


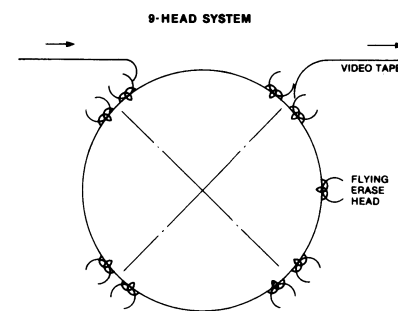
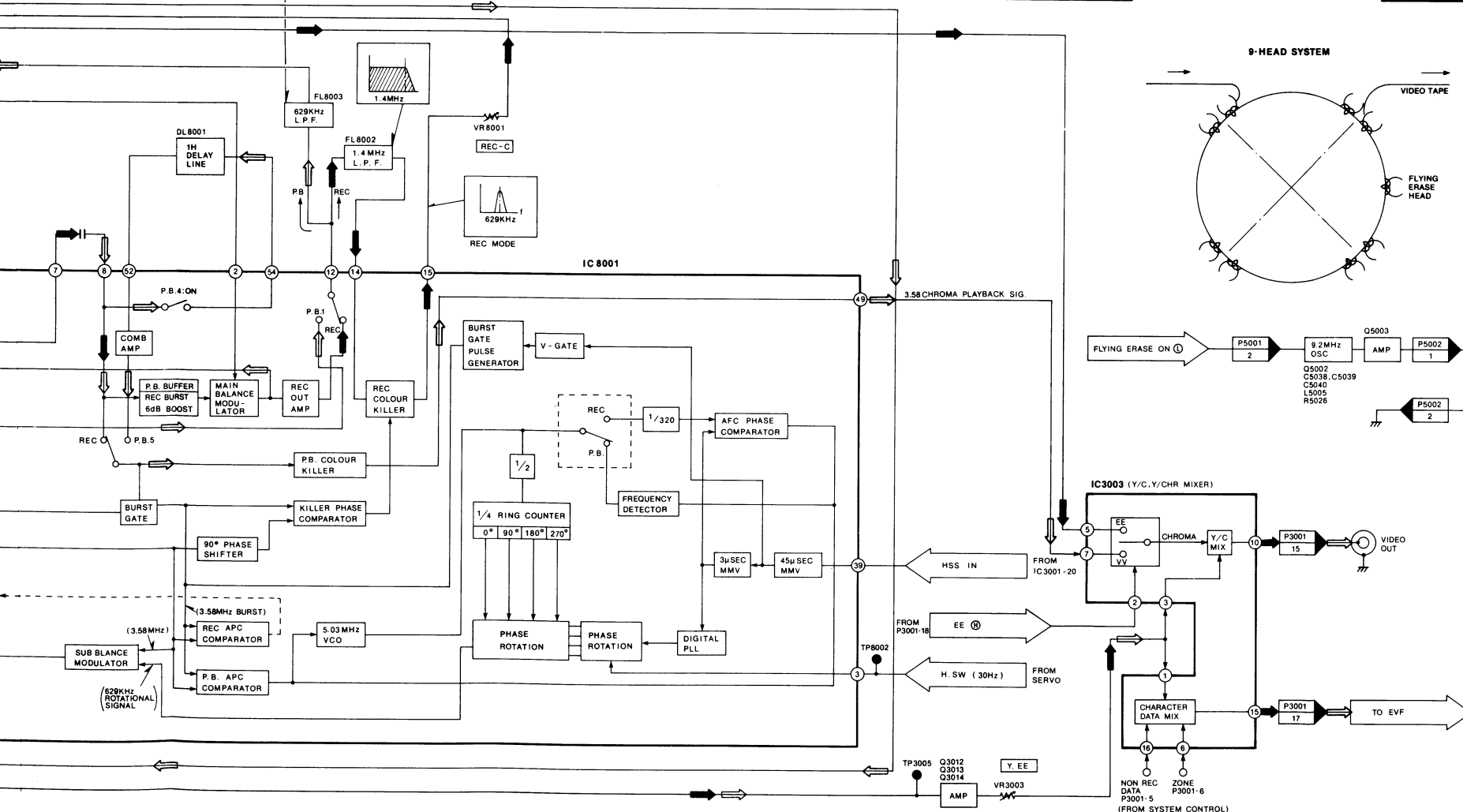
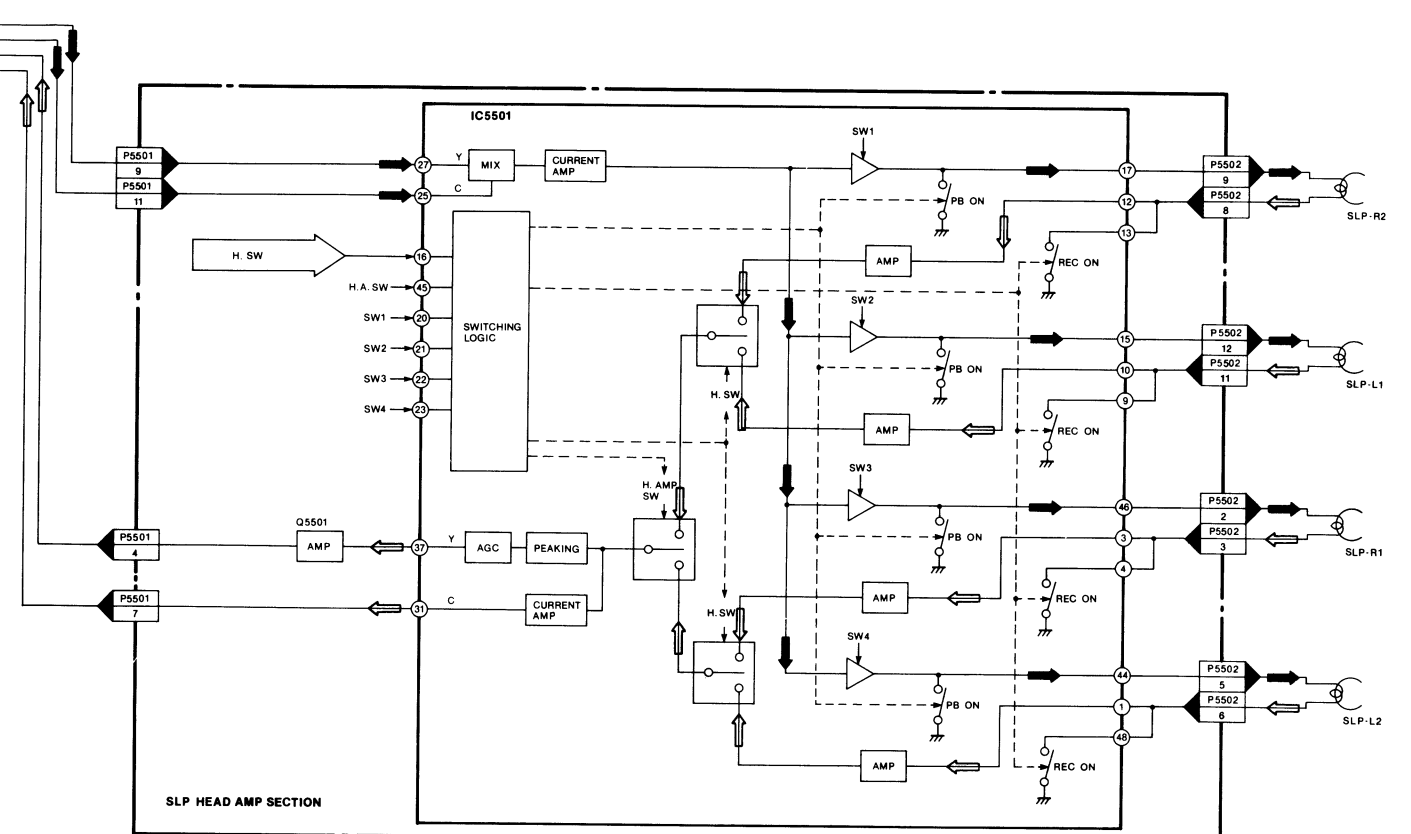
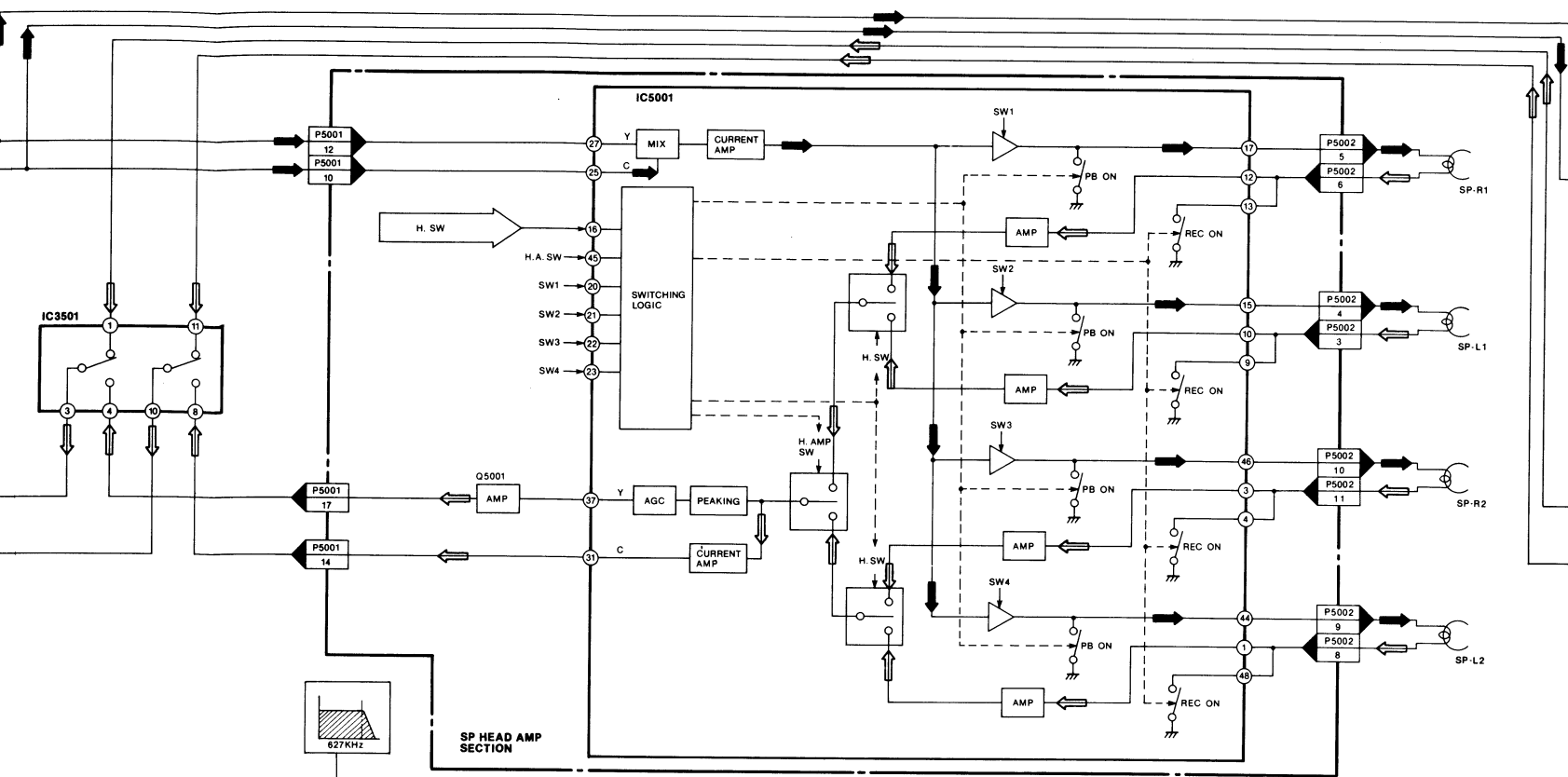
GNAL
ITE SIGNAL

← R-Y SIGNAL
← B-Y SIGNAL

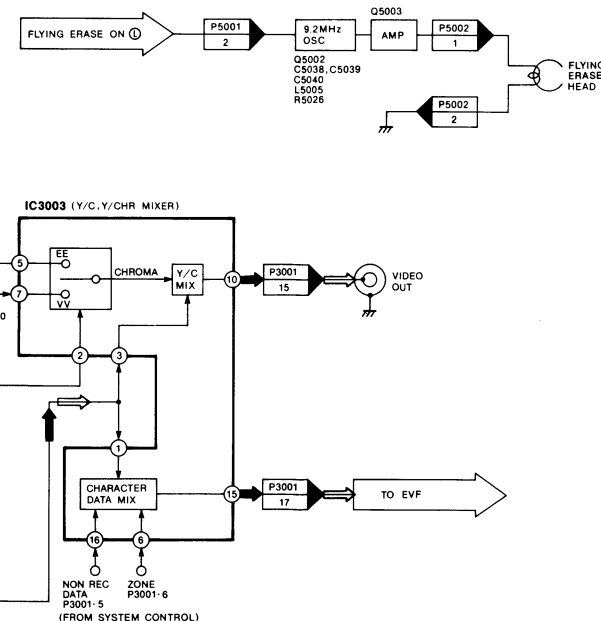


3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

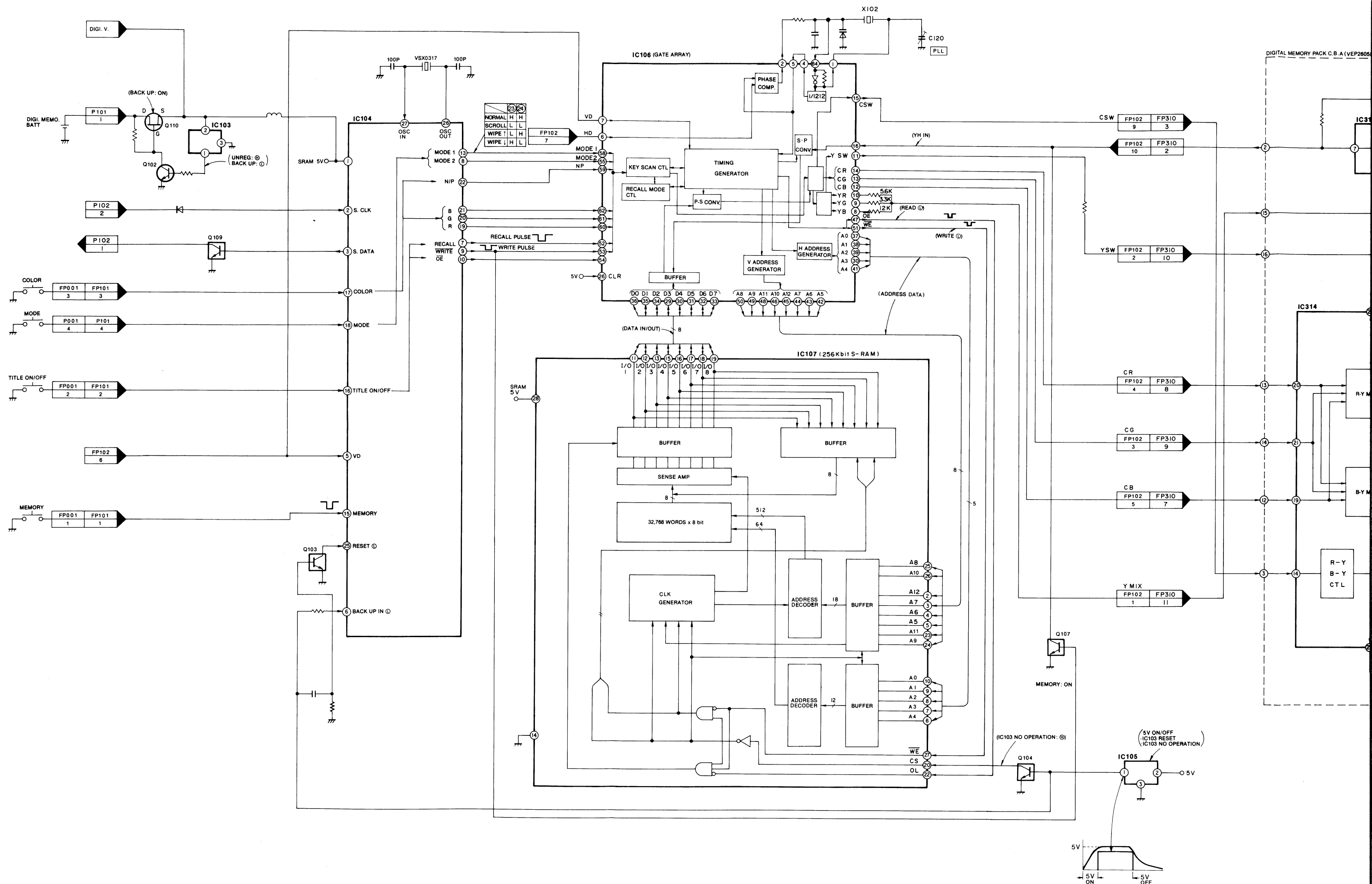


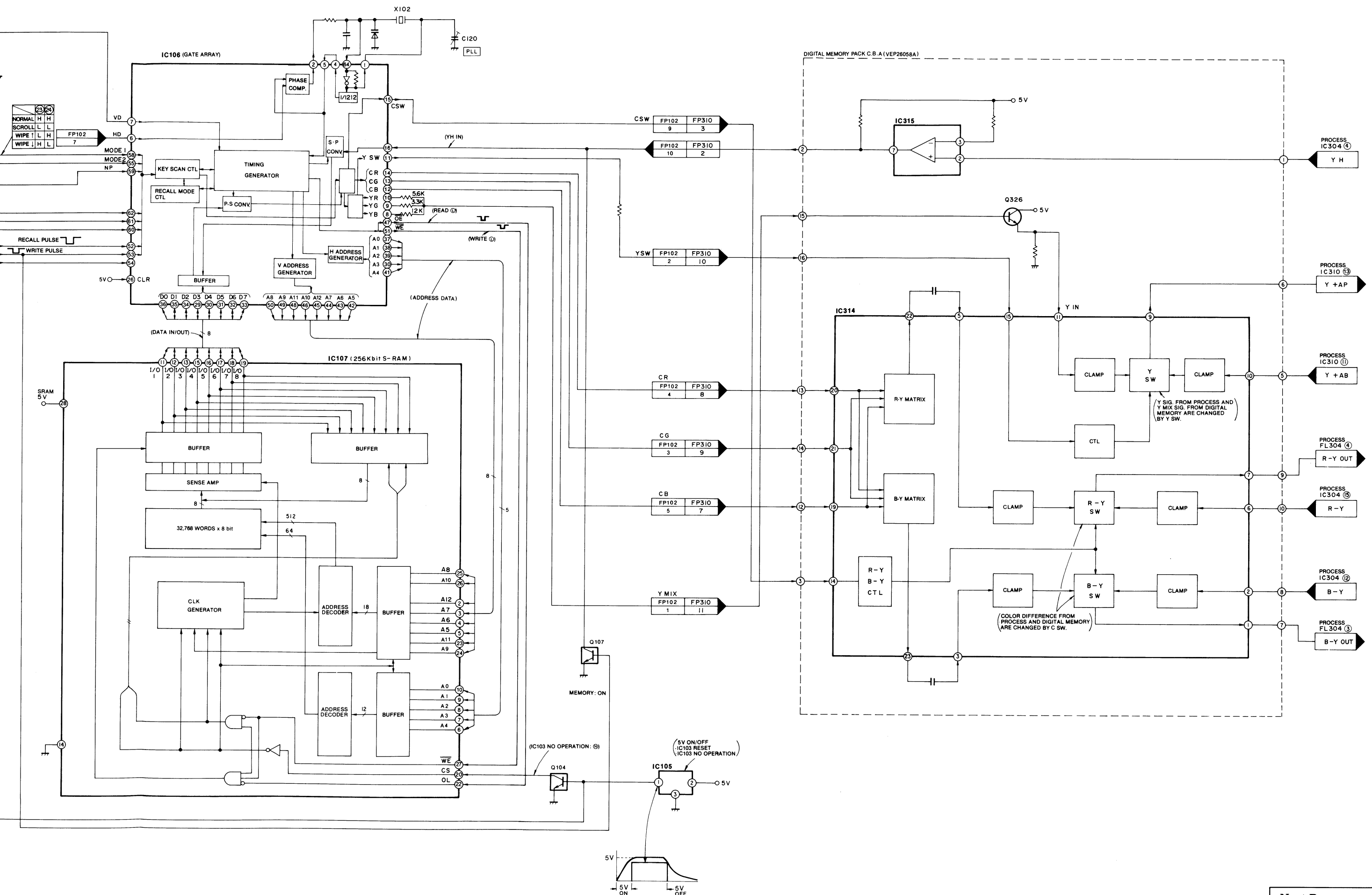


← MAIN SIGNAL PATH IN REC MODE
 ← MAIN SIGNAL PATH IN PLAYBACK MODE



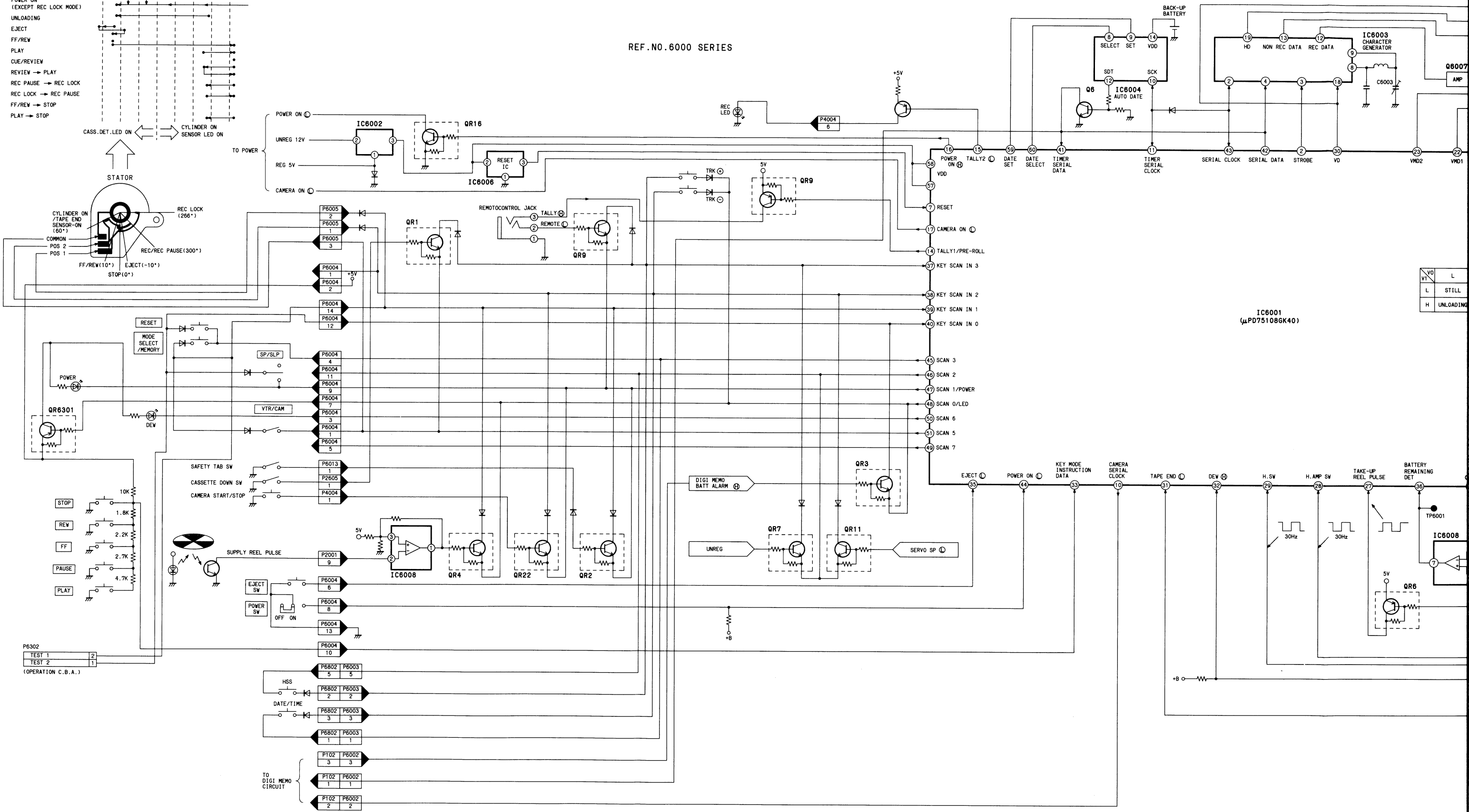
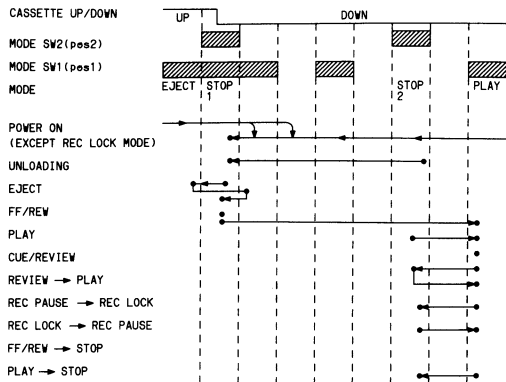
3-3. DIGITAL MEMORY BLOCK DIAGRAM



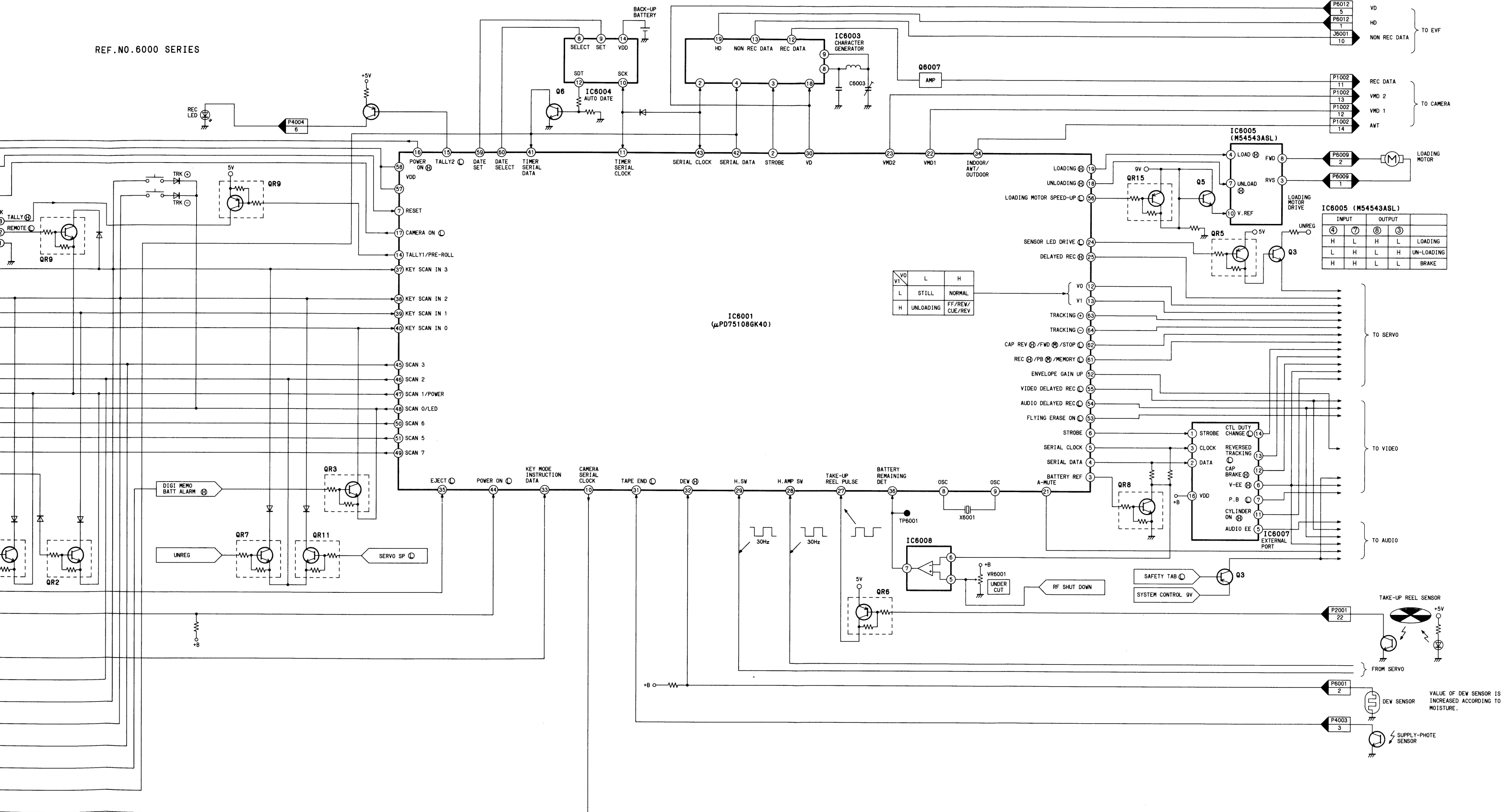


3-4. SYSTEM CONTROL BLOCK DIAGRAM

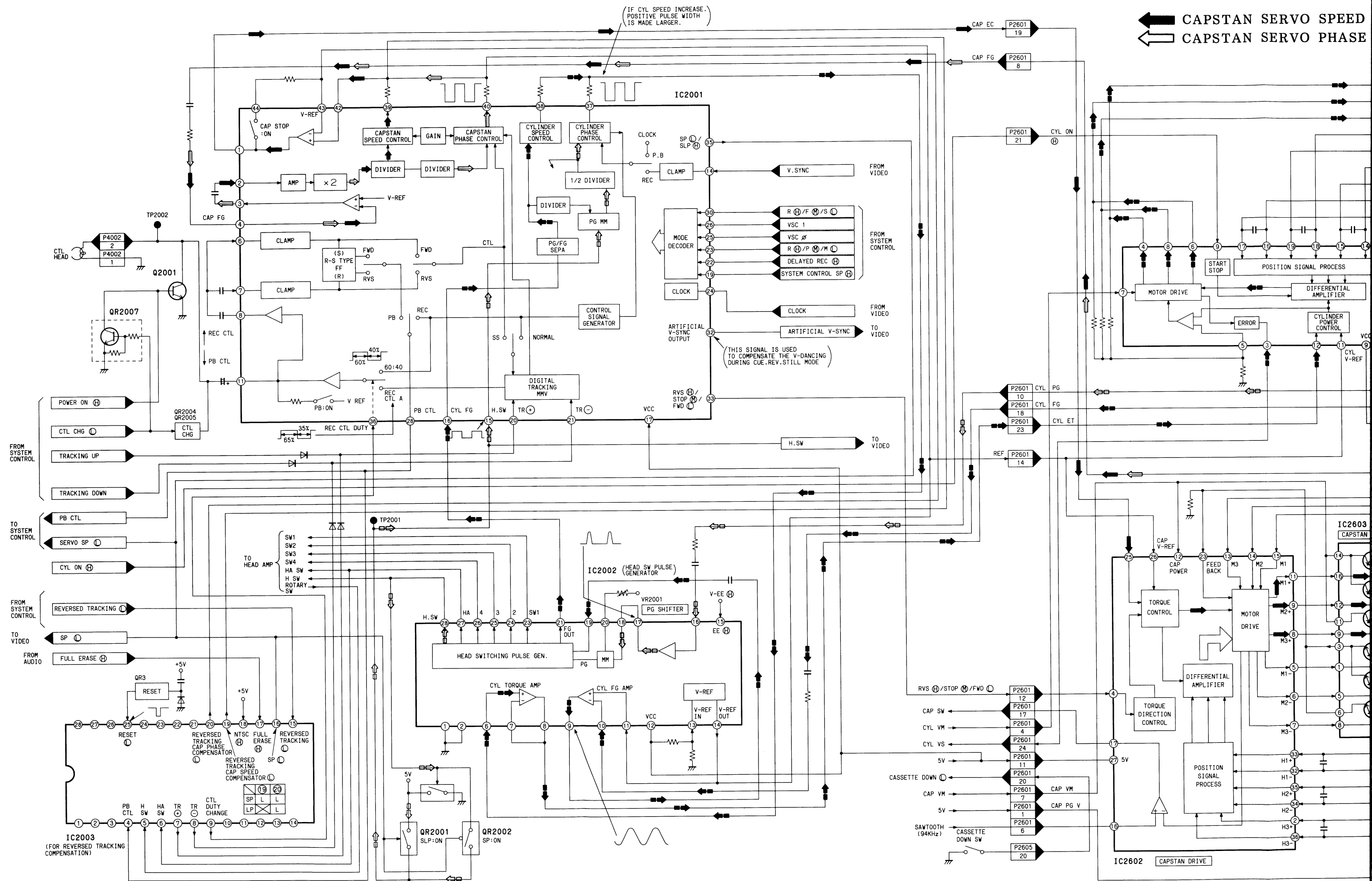
MODE MOVING CHART

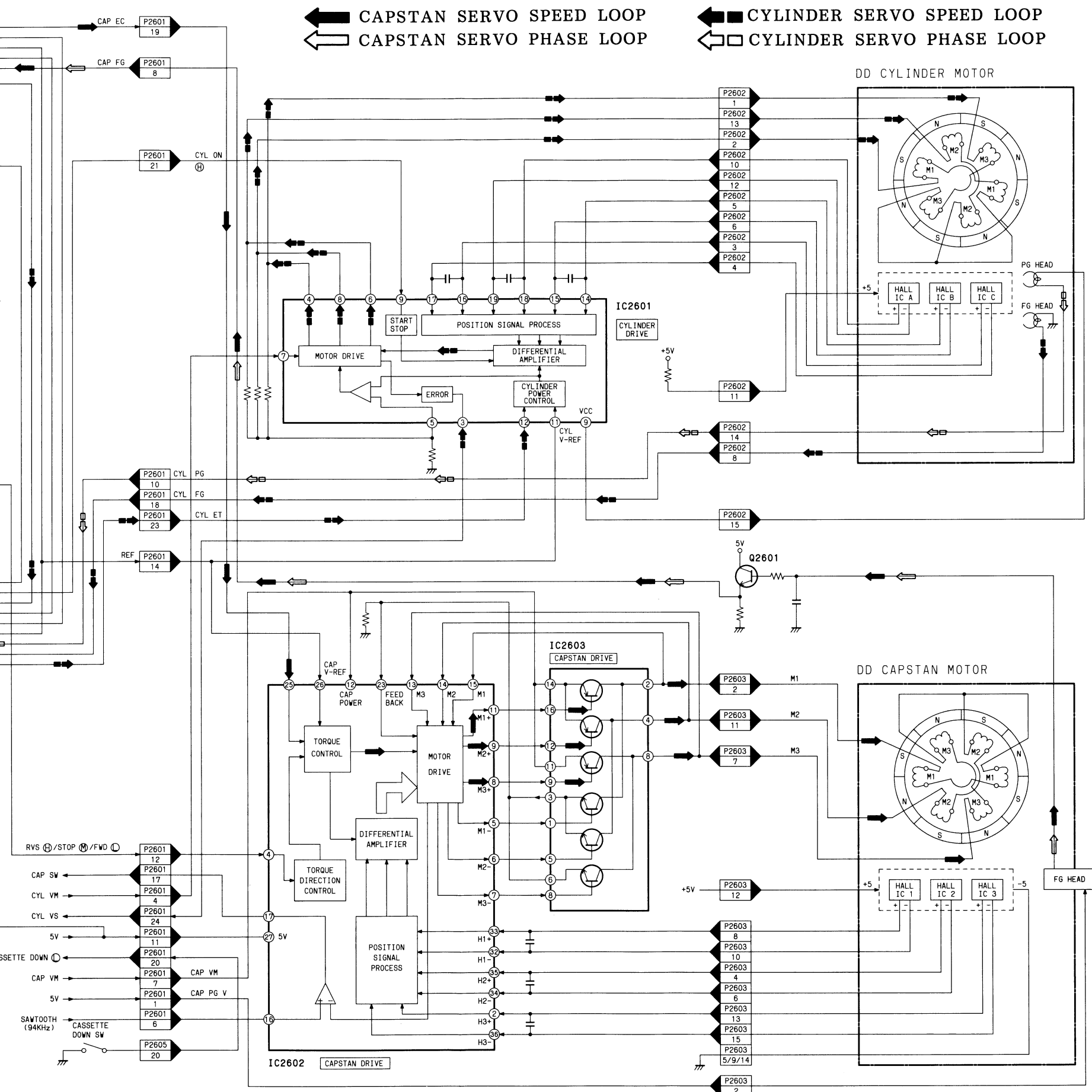
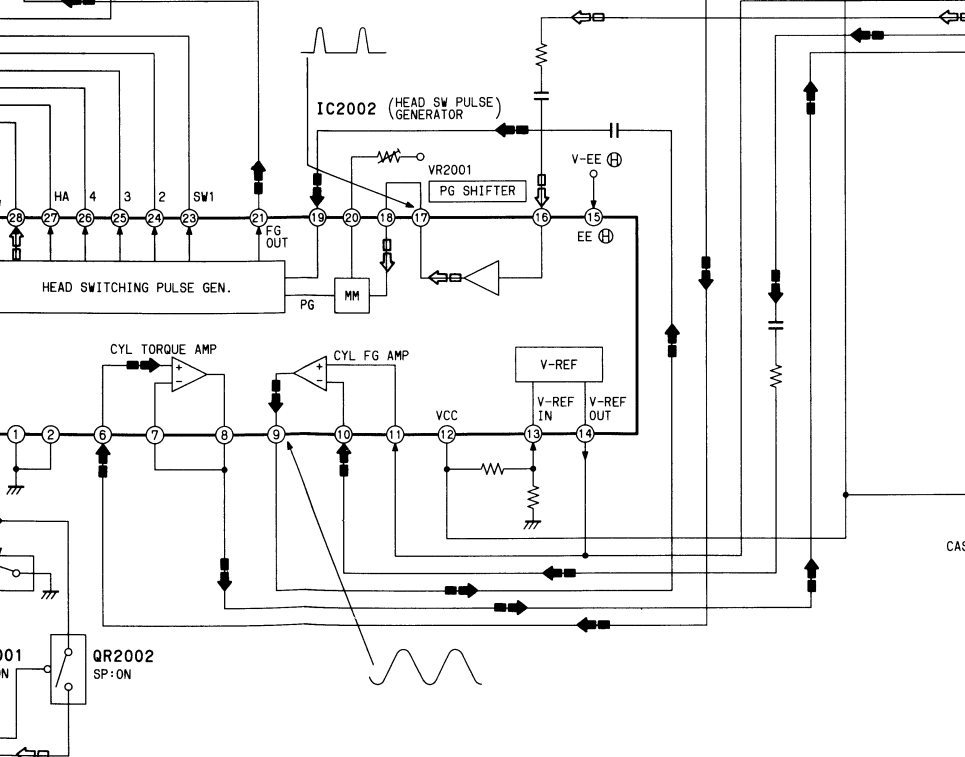
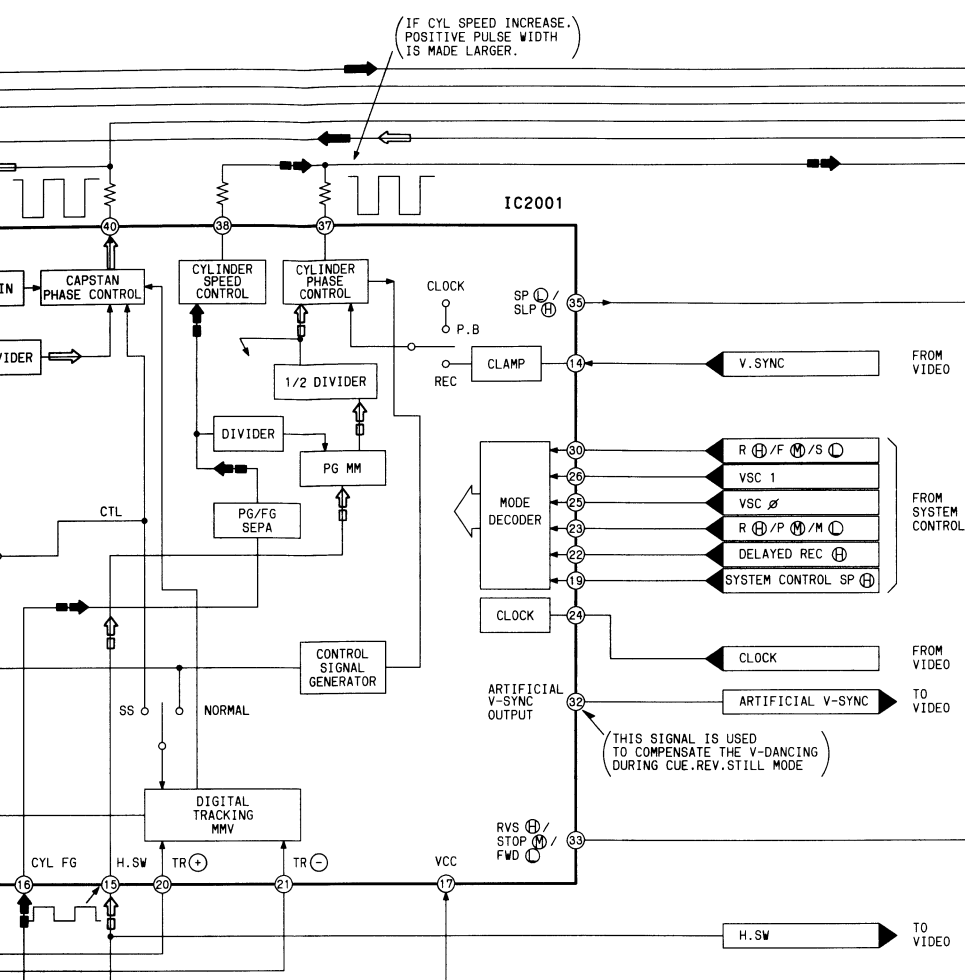


REF.NO.6000 SERIES

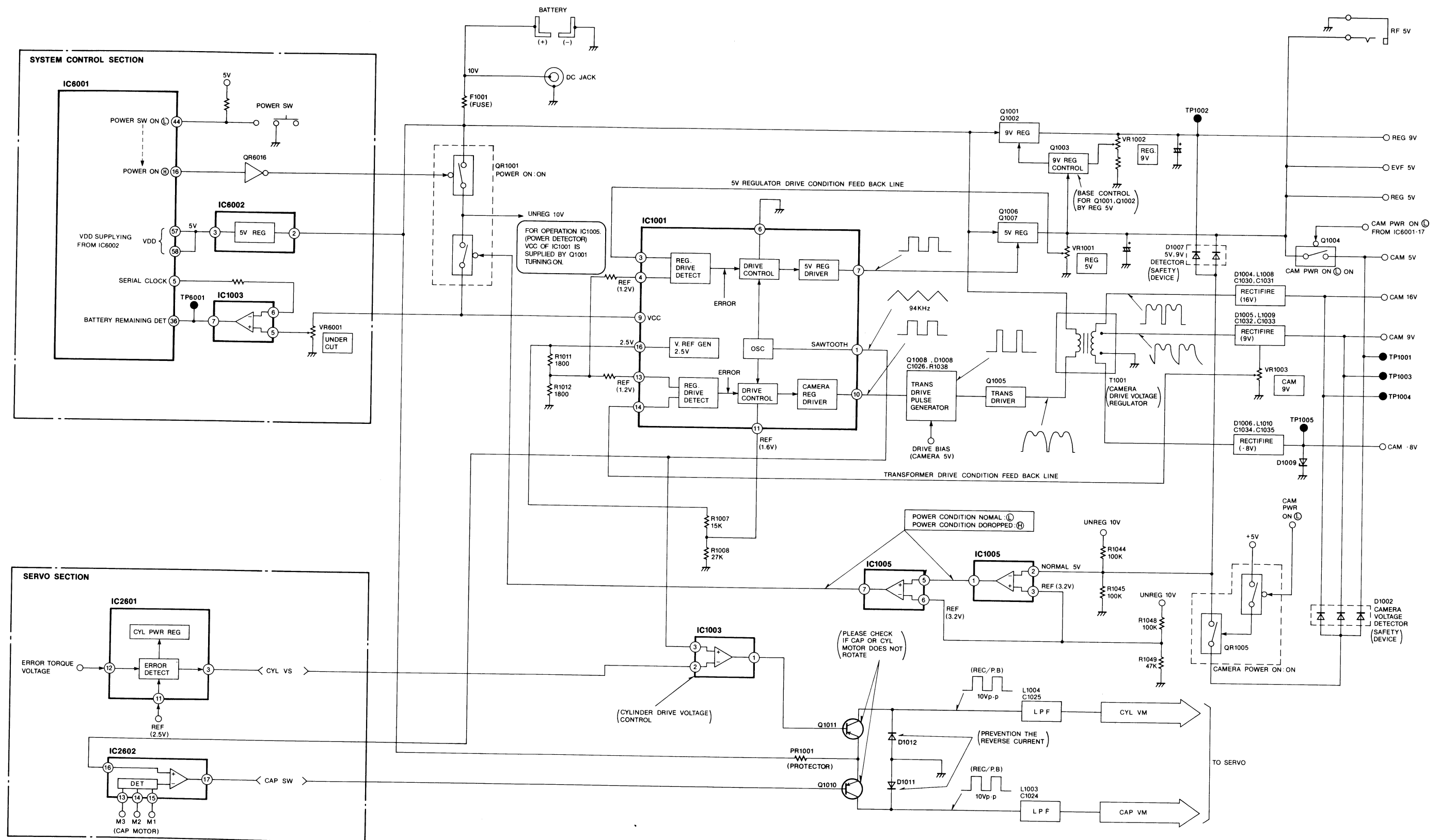


3-5. SERVO BLOCK DIAGRAM

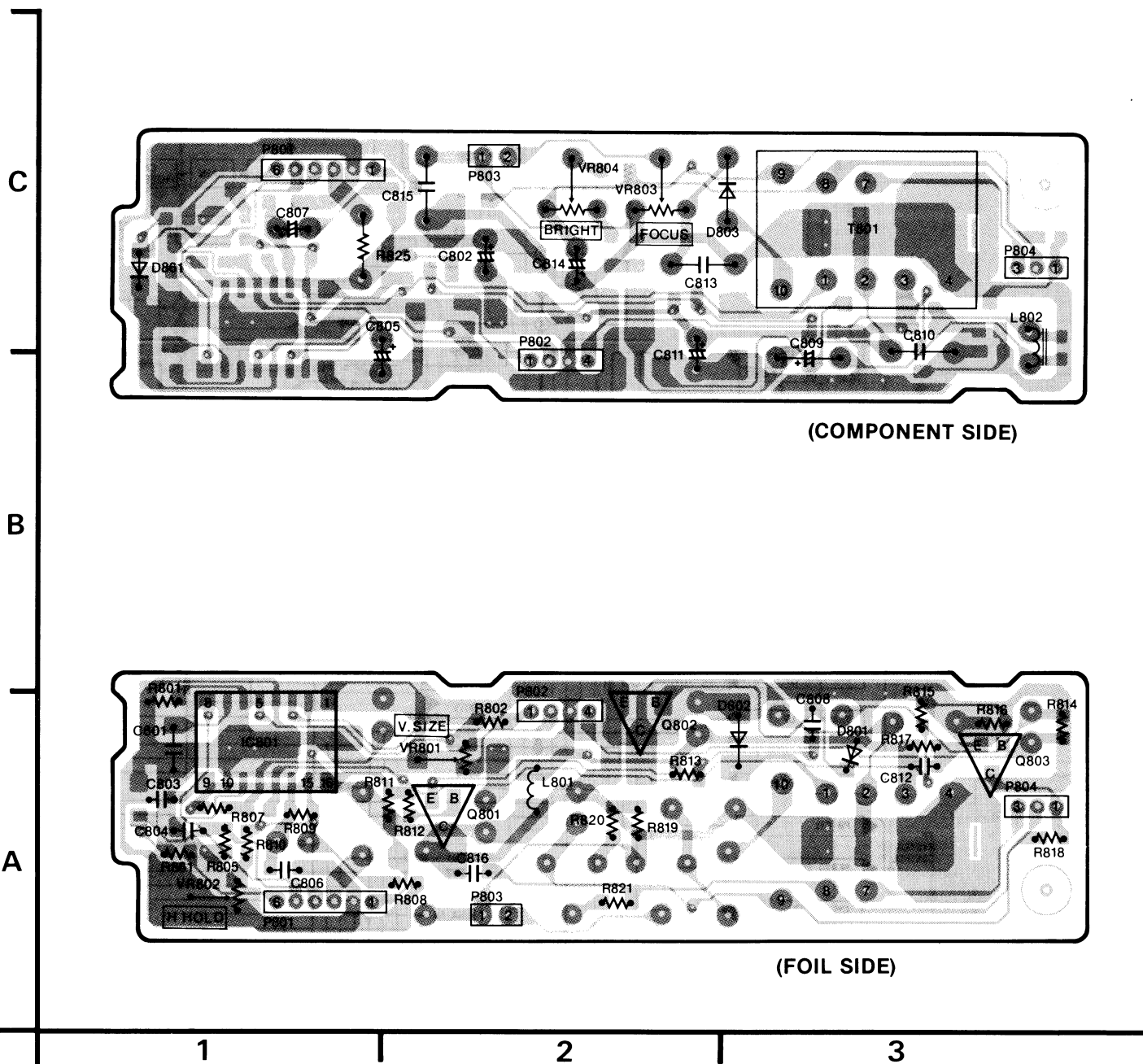




3-6. POWER SUPPLY BLOCK DIAGRAM



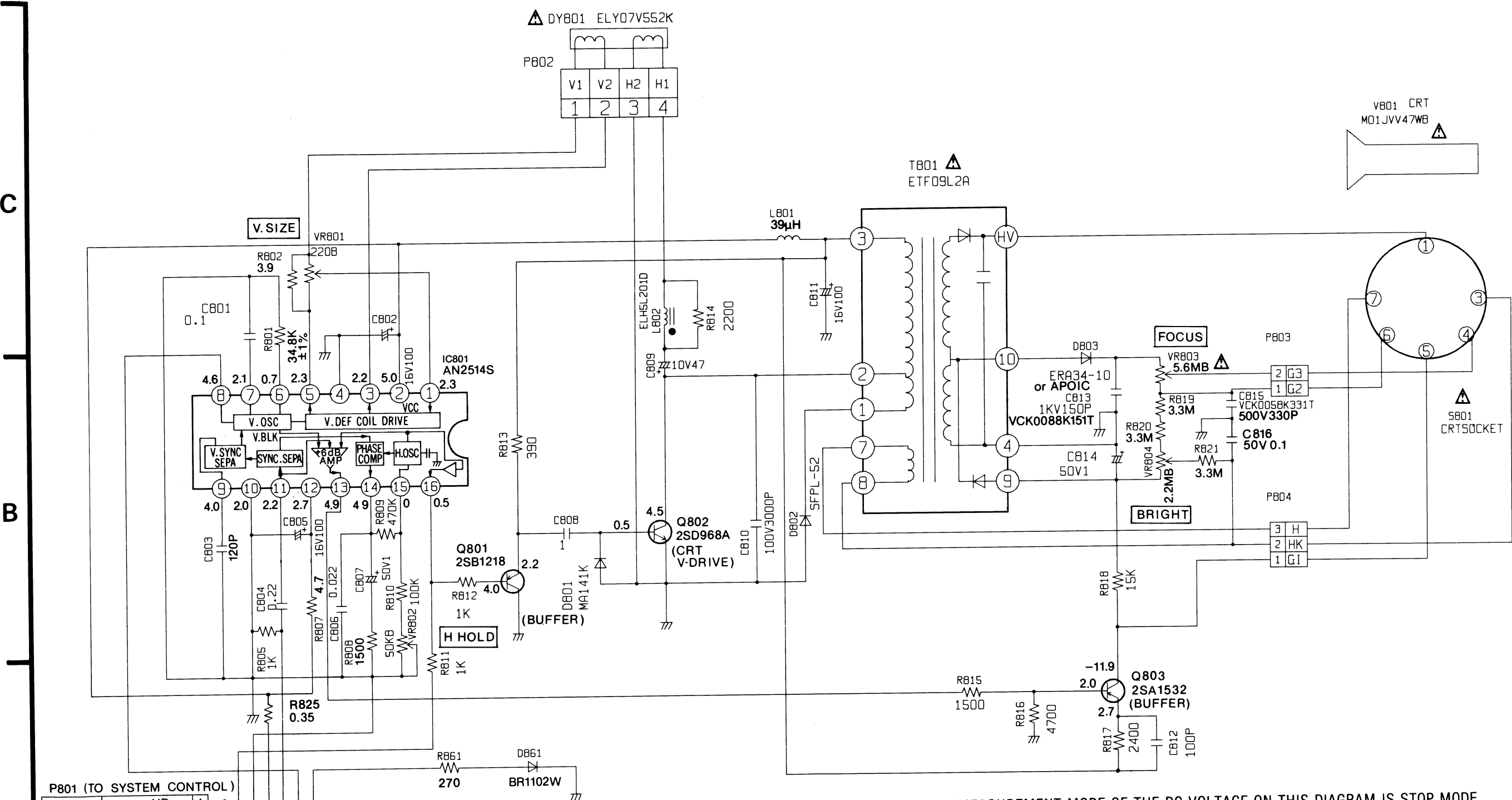
3-7. E.V.F. C.B.A. (VEP28022A)



E.V.F. C.B.A.			
Transistor		Connector	
Q801	A-2 ②	P801	A-1 ②
Q802	A-2 ②	P801	C-1 ③
Q803	A-3 ③	P802	A-2 ②
Integrated Circuit		P802	C-2 ③
IC801	A-1 ②	P803	A-2 ②
Adjustment		P803	C-2 ③
VR801	A-2 ②	P804	A-3 ③
VR802	A-1 ②	P804	C-3 ③
VR803	C-2 ③		
VR804	C-2 ③		

ADDRESS INFORMATION
 ②...COMPONENT SIDE
 ③...FOIL SIDE

3-8. E.V.F. SCHEMATIC DIAGRAM

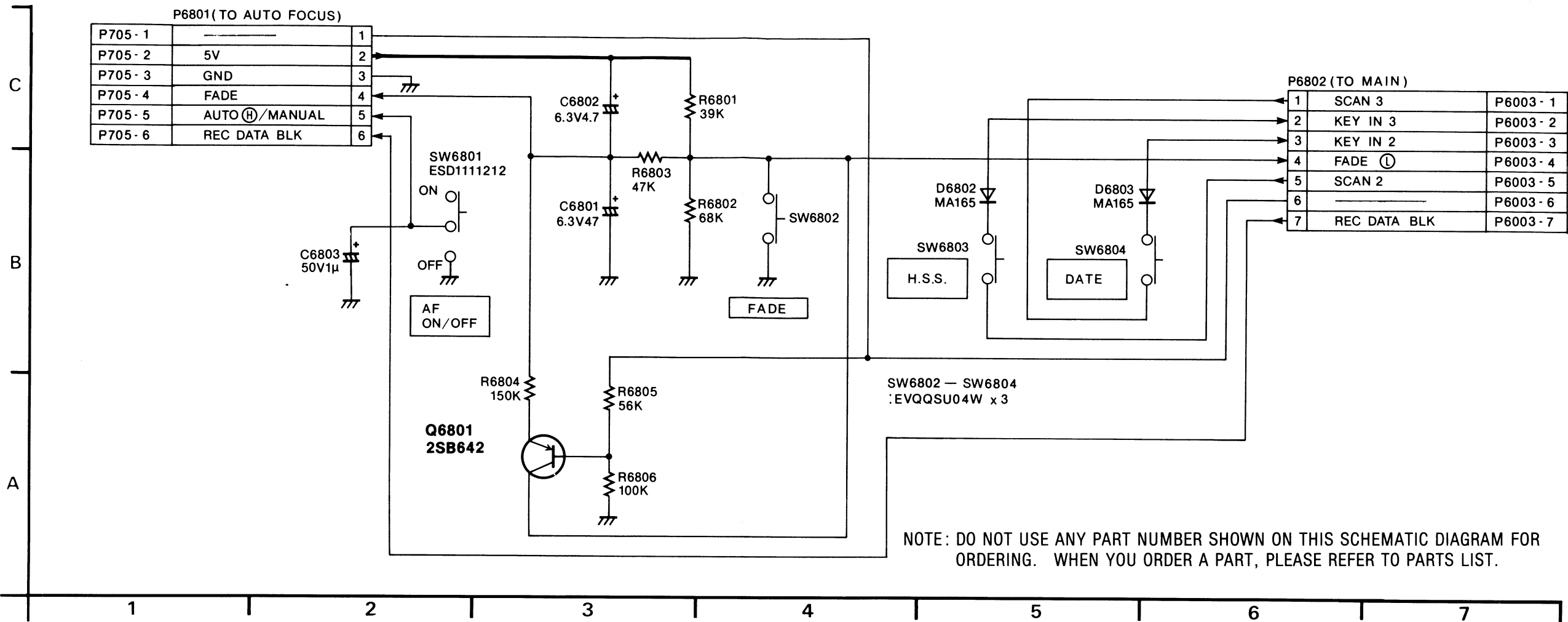


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

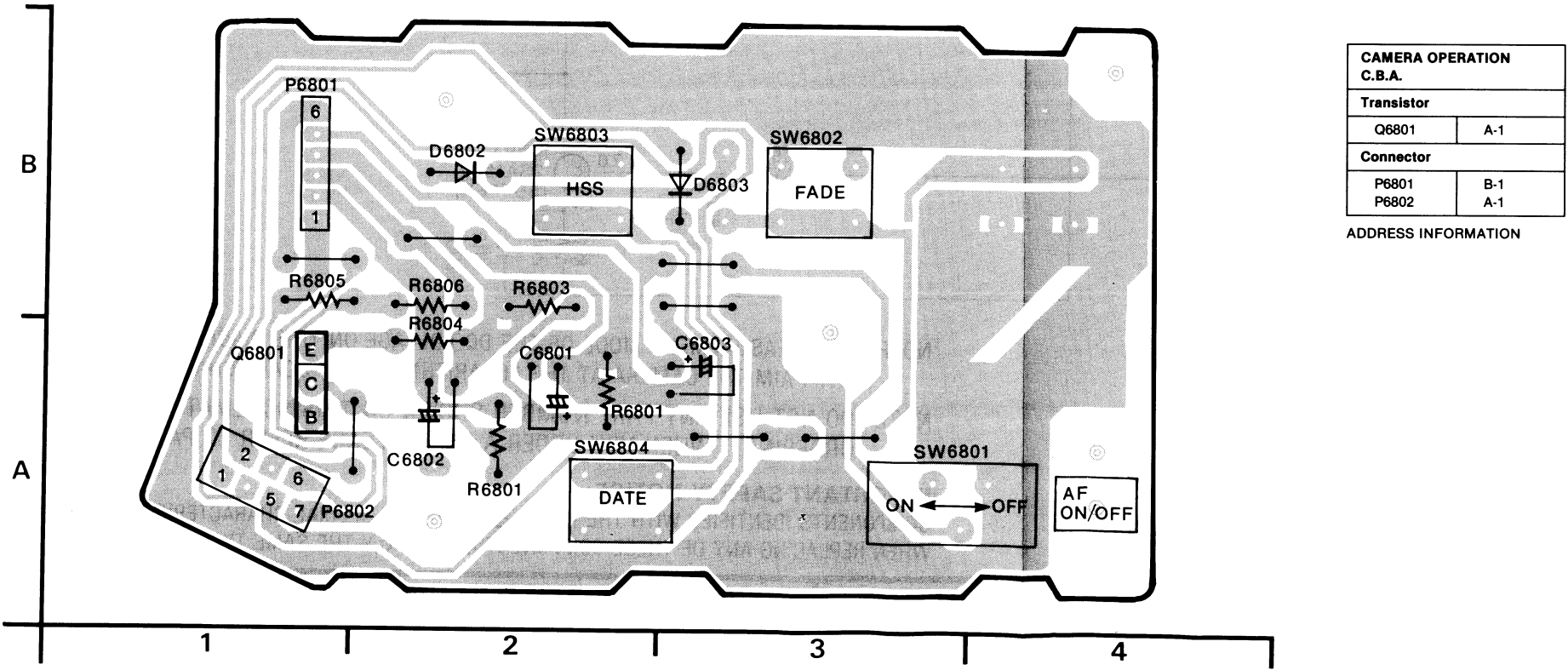
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

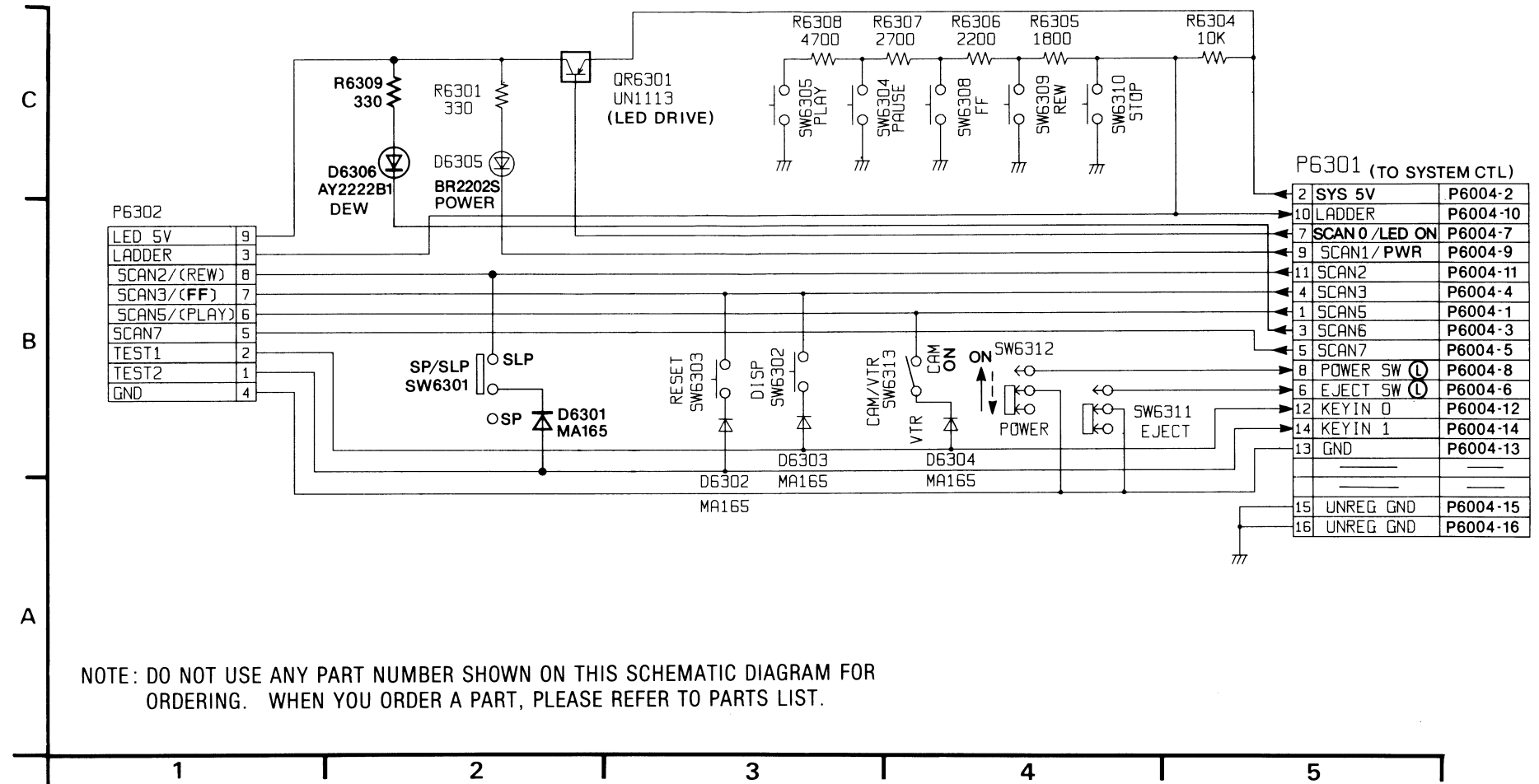
3-9. CAMERA OPERATION SCHEMATIC DIAGRAM



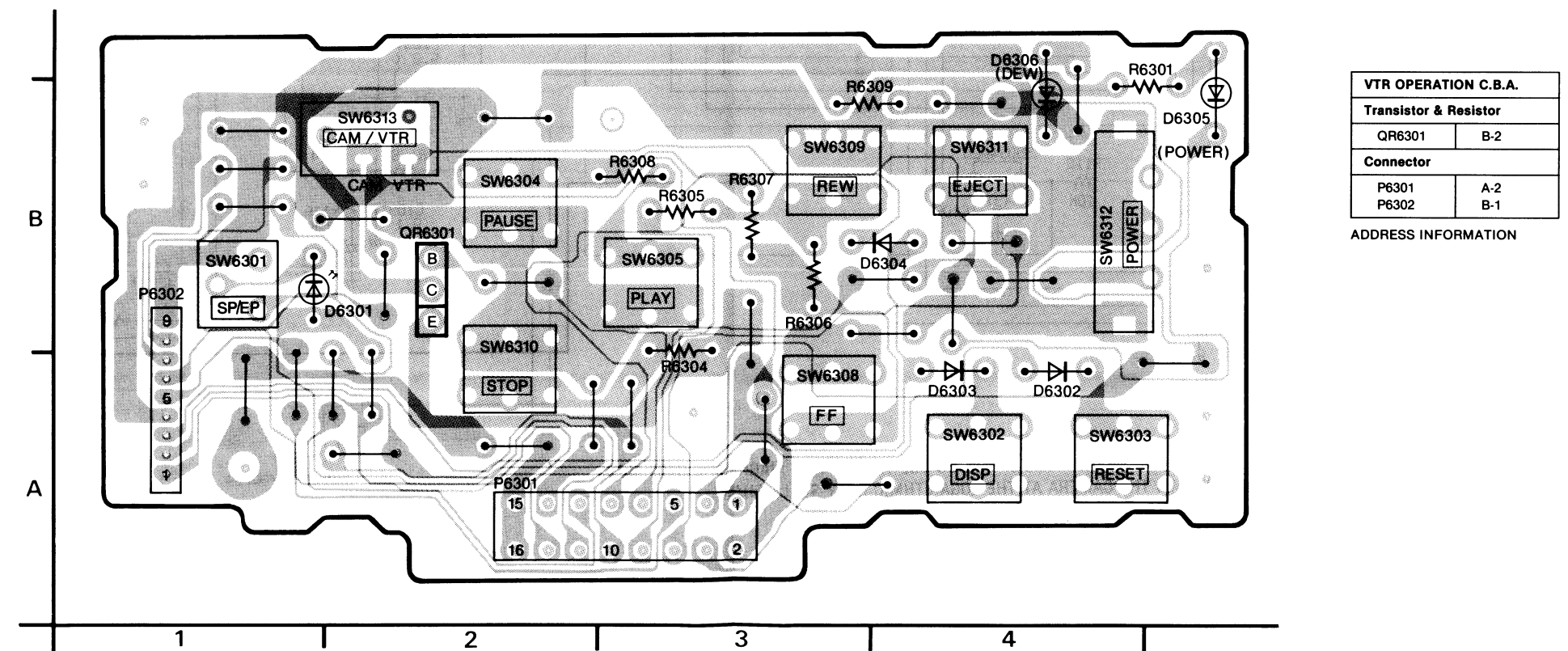
3-10. CAMERA OPERATION C.B.A. (VEP06591A)



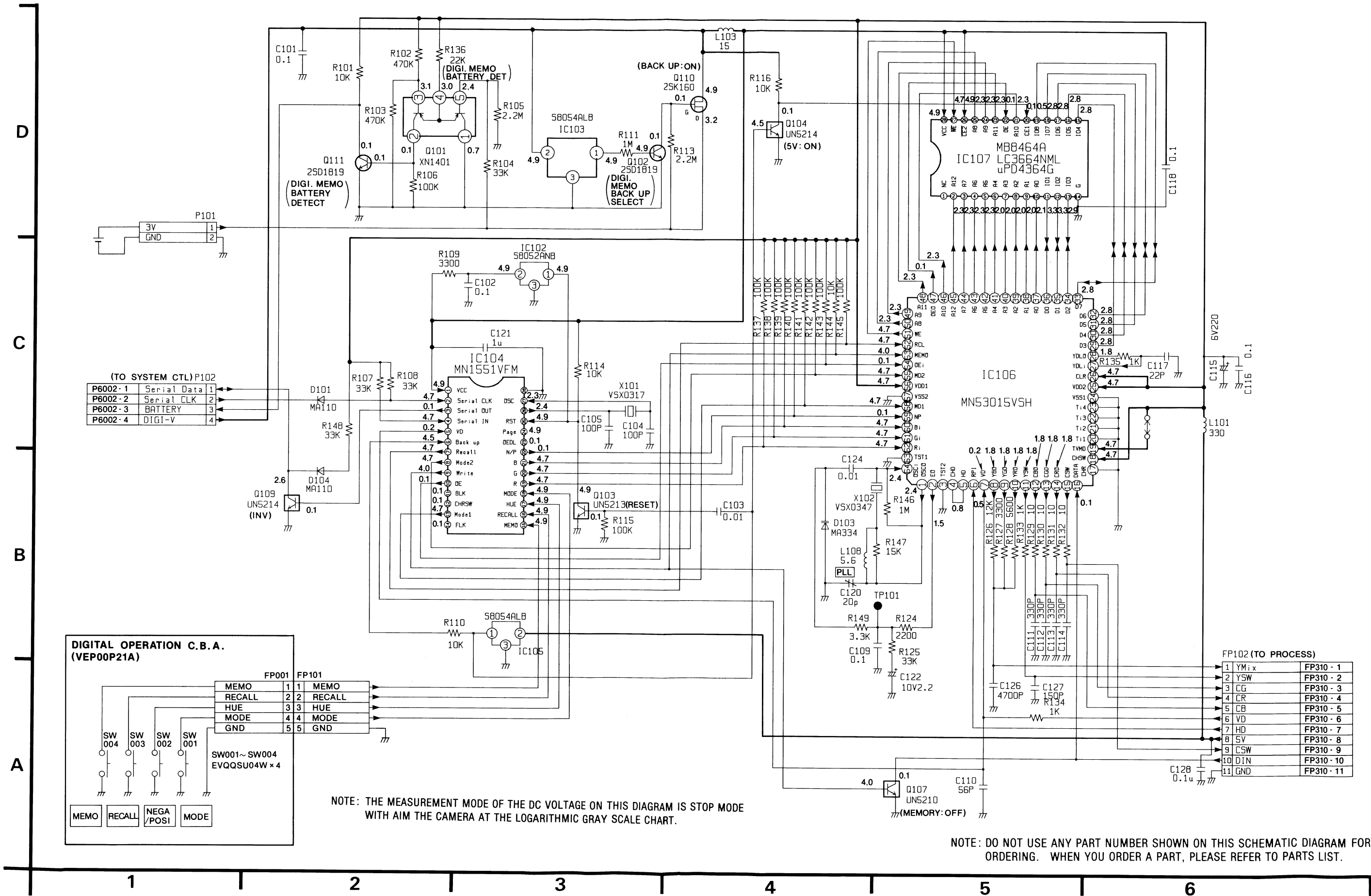
3-11. VTR OPERATION SCHEMATIC DIAGRAM



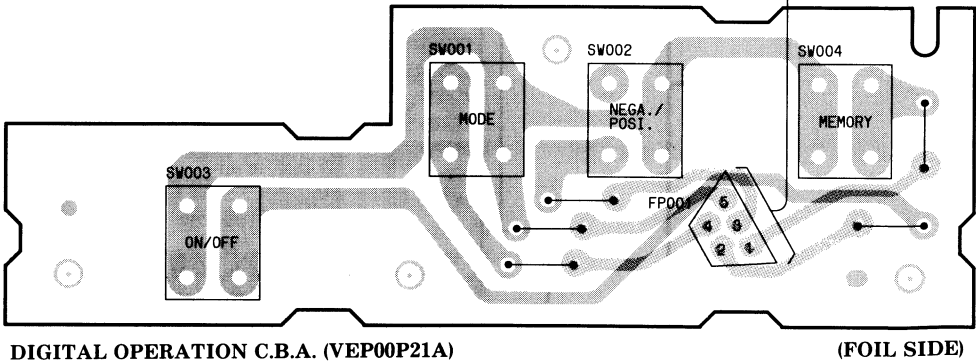
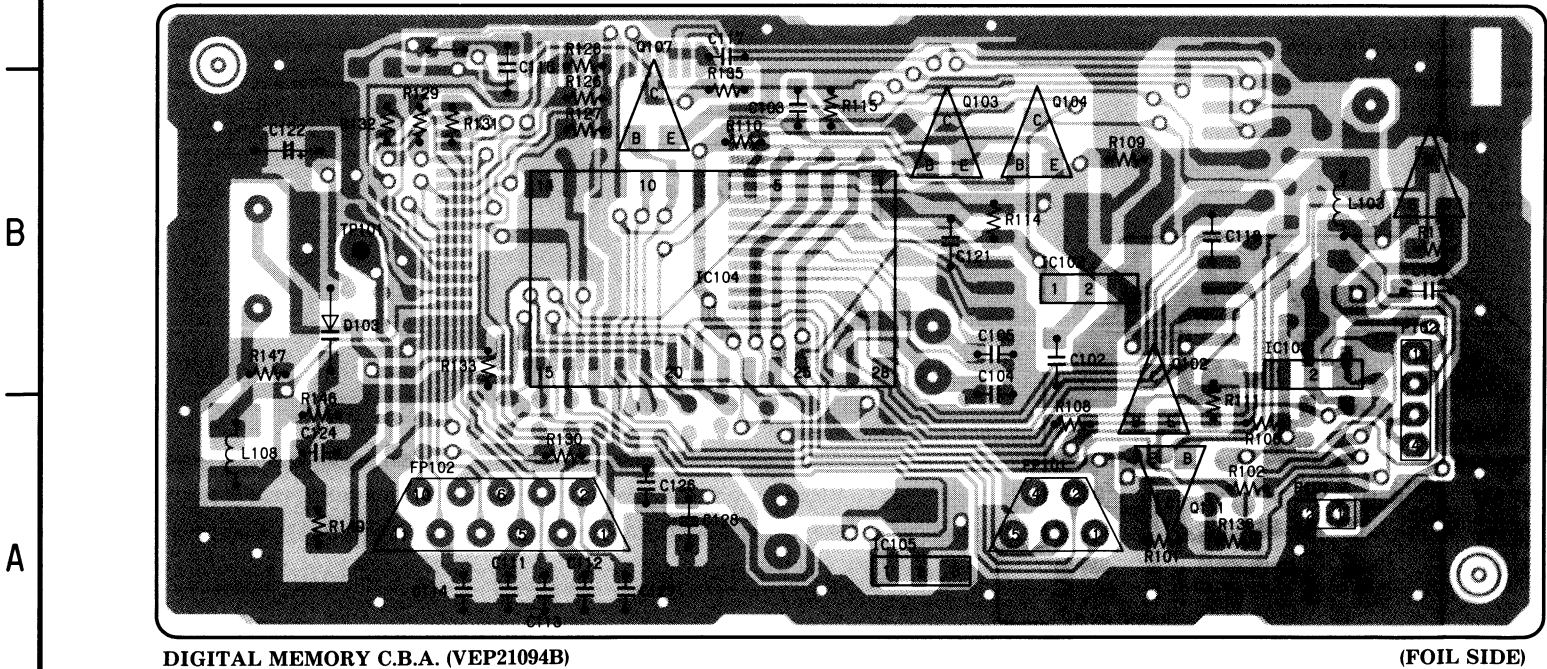
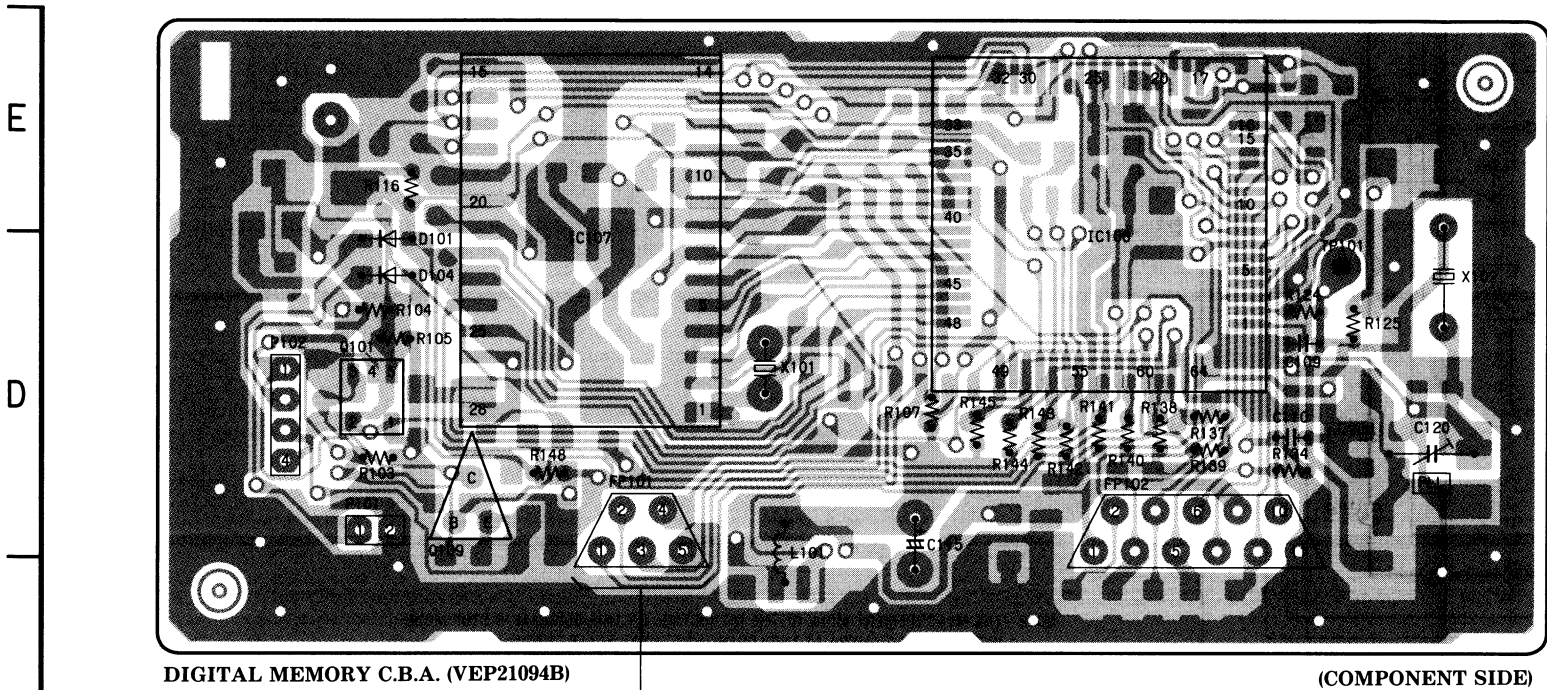
3-12. VTR OPERATION C.B.A. (VEP06592A)



3-13. DIGITAL MEMORY & DIGITAL OPERATION SCHEMATIC DIAGRAM



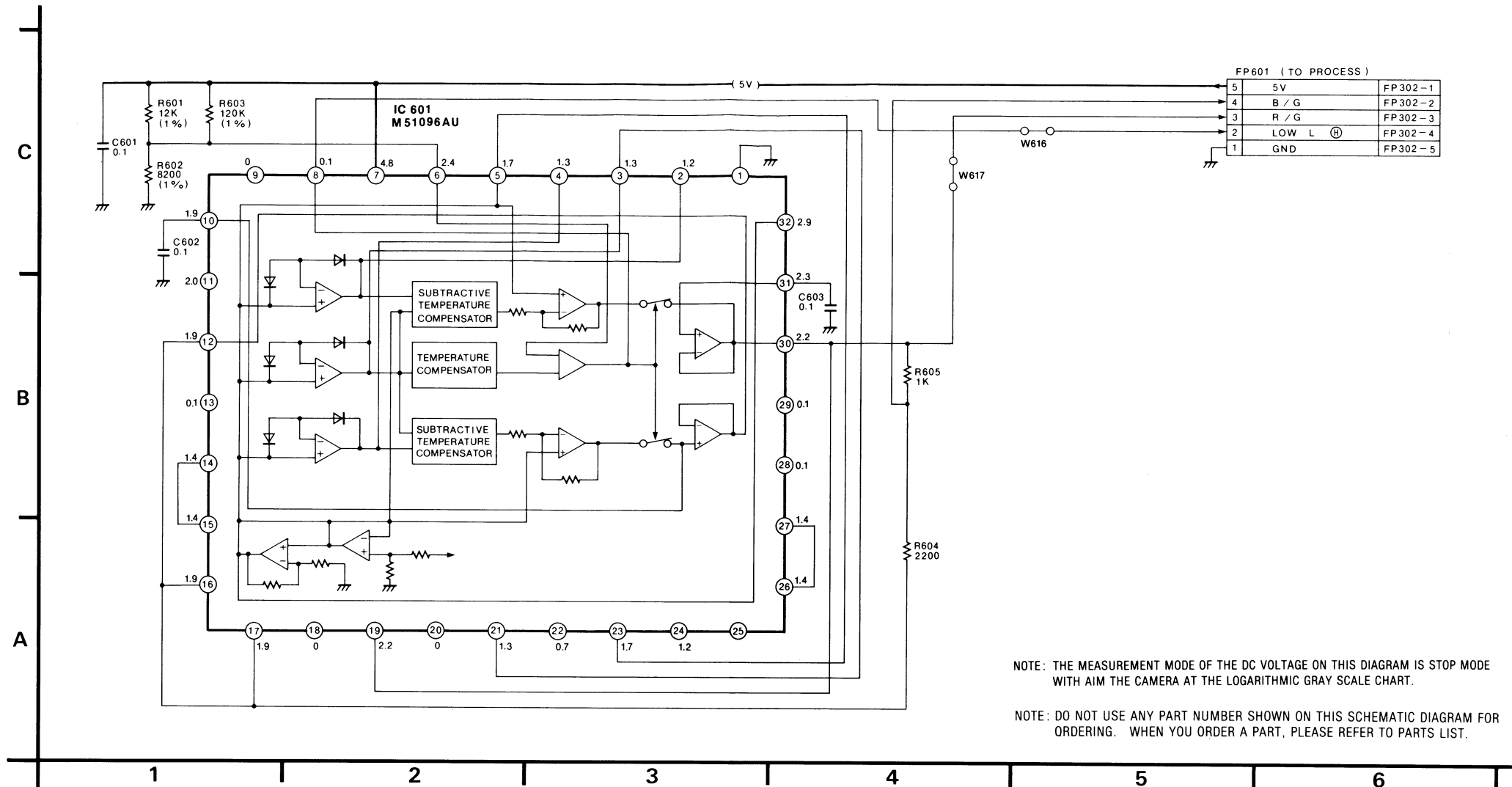
3-14. DIGITAL MEMORY C.B.A. (VEP21094B) & DIGITAL OPERATION C.B.A. (VEP00P21A)



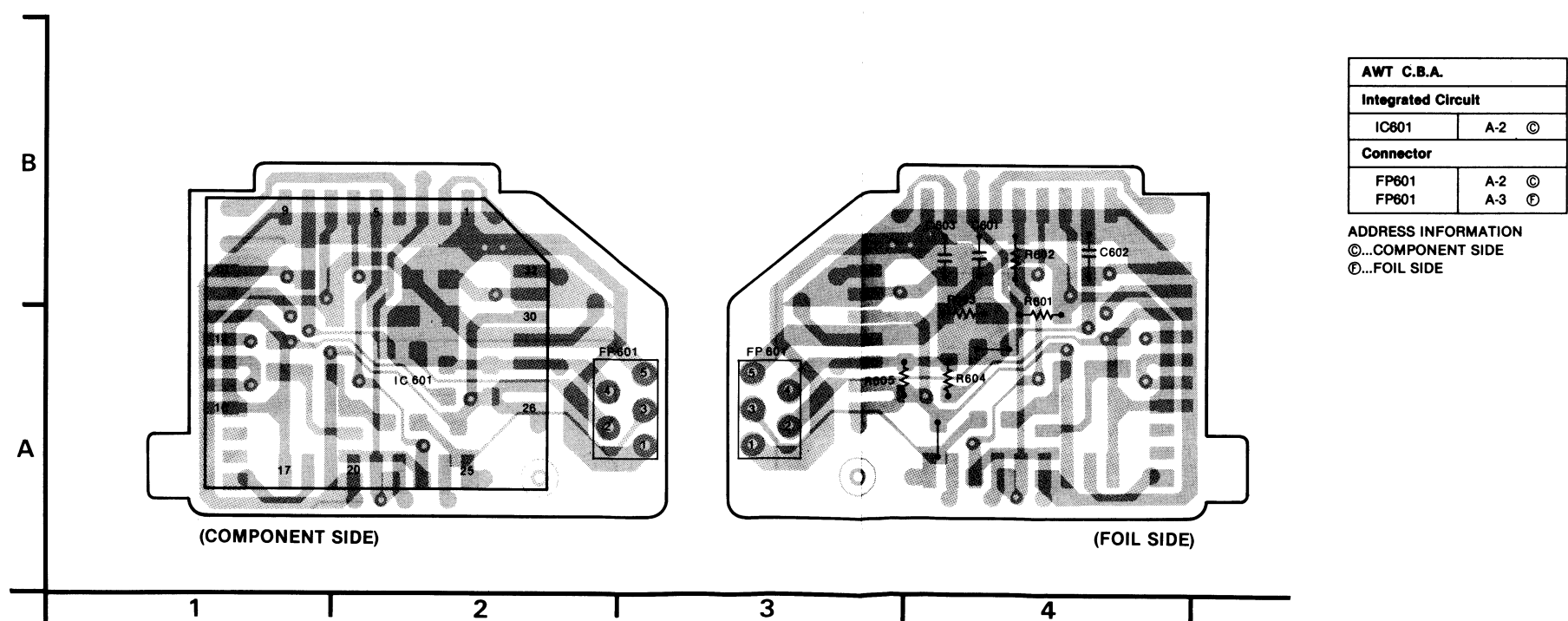
DIGITAL MEMORY C.B.A.			
Transistor		Test Point	
Q101	D-1	TP101	D-4
Q102	B-4	TP101	B-1
Q103	B-3	Adjustment	
Q104	B-4		
Q107	C-2	C120	D-5
Q109	D-2	Connector	
Q110	B-5		
Q111	A-4	FP001	A-8
Integrated Circuit		FP101	D-2
IC102	B-4	FP101	A-4
IC103	B-4	FP102	D-4
IC104	B-2	FP102	A-2
IC105	A-3	P101	D-1
IC106	E-3	P101	A-5
IC107	E-2	P102	D-1
		P102	B-5

ADDRESS INFORMATION
©...COMPONENT SIDE
Ⓢ...FOIL SIDE

3-15. AWT SCHEMATIC DIAGRAM

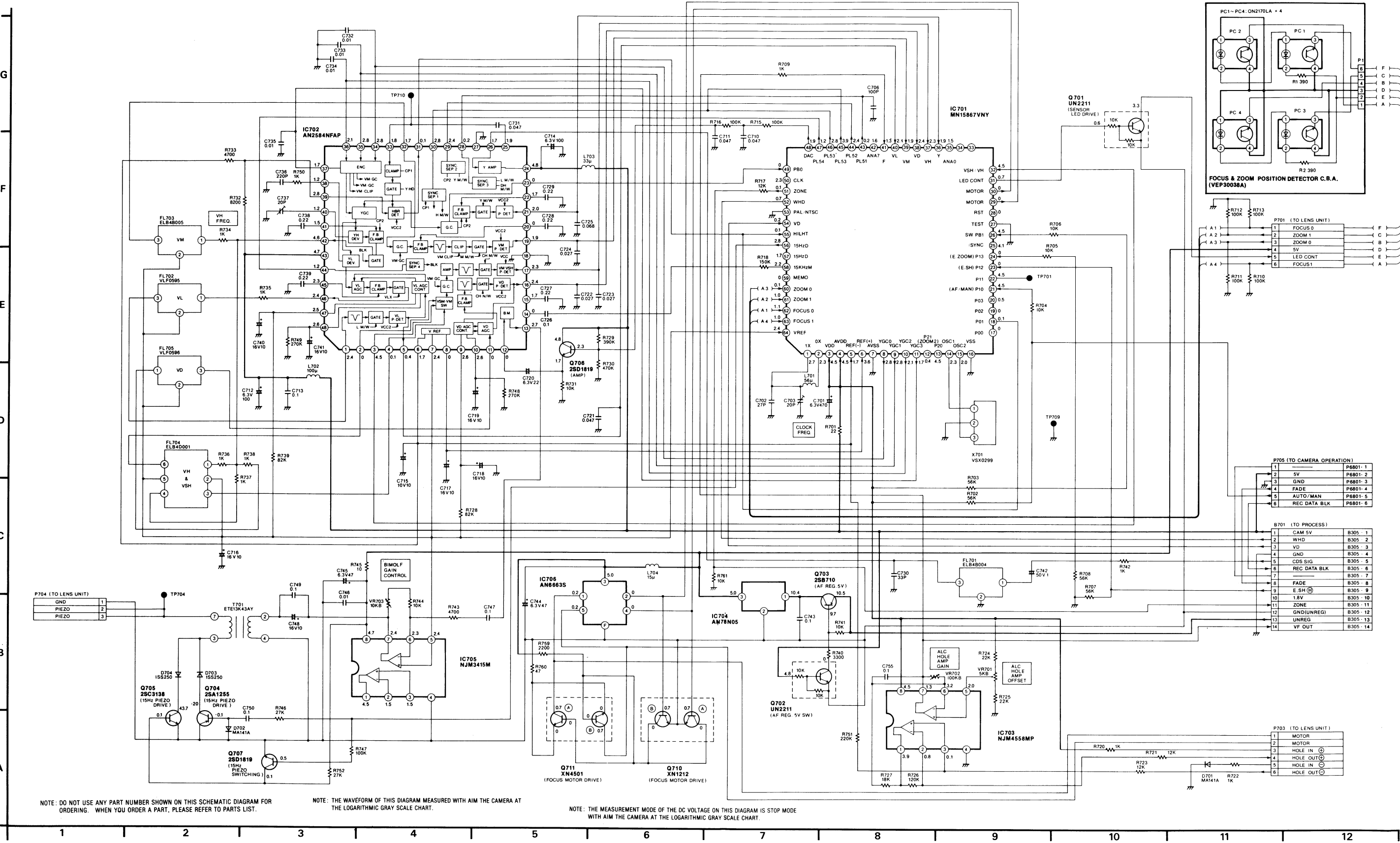


3-16. AWT C.B.A. (VEP22083B)



3-17. AUTO FOCUS SCHEMATIC DIAGRAM

3-18. AUT

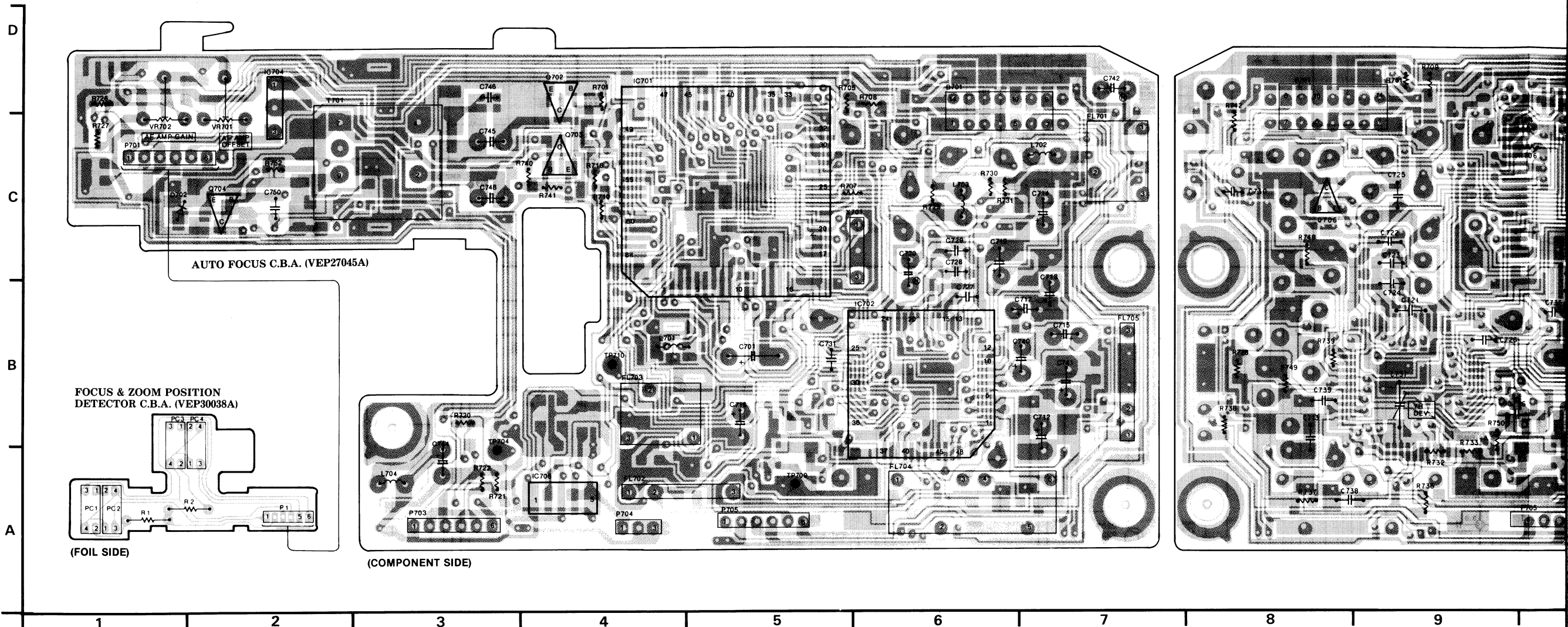
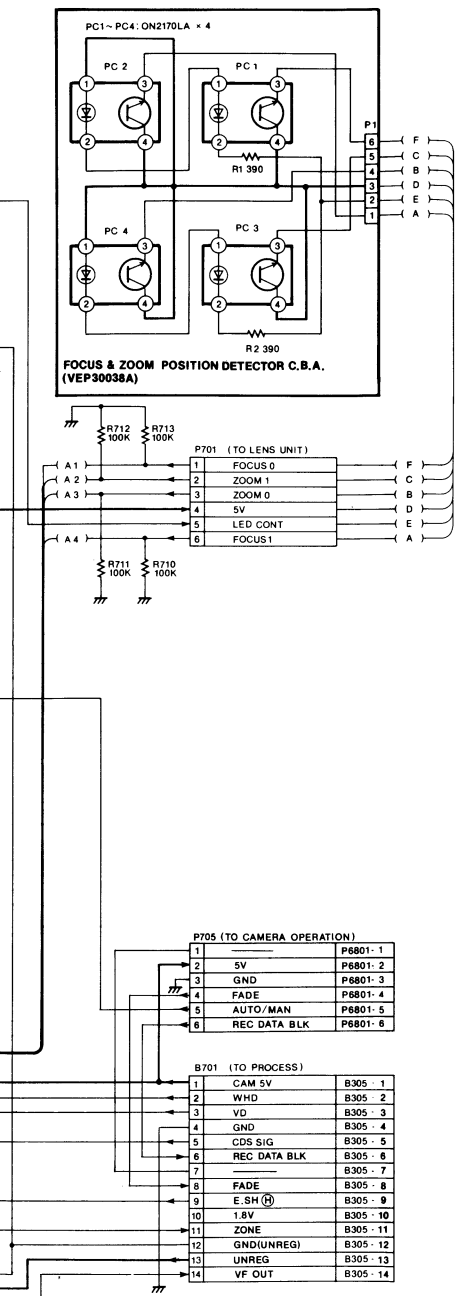


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

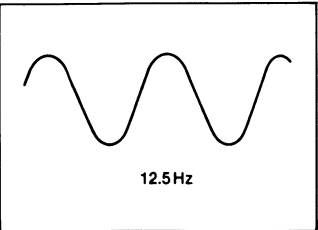
NOTE: THE WAVEFORM OF THIS DIAGRAM MEASURED WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

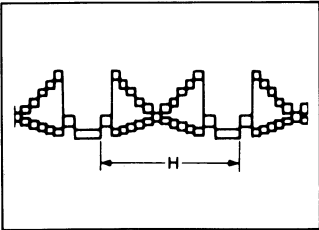
3-18. AUTO FOCUS C.B.A. (VEP27045A)



AUTO FOCUS CIRCUIT TP (Test Point) WAVEFORM (REF. NO. 700 Series)



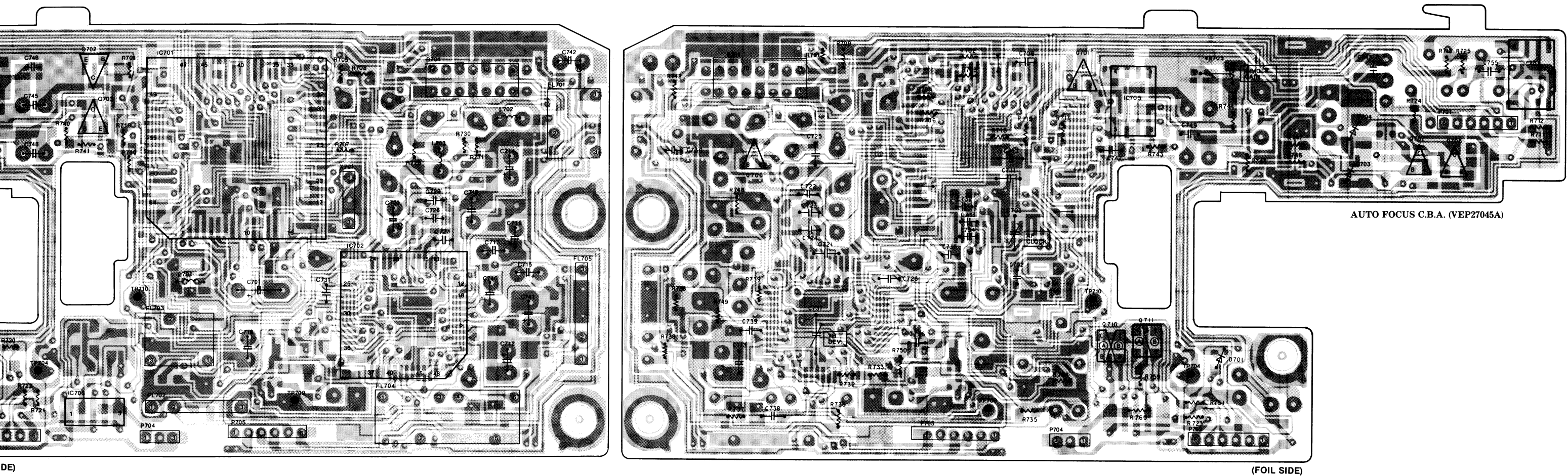
TP704 STOP
10.0V/20msec. div. 30Vp-p



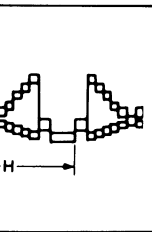
TP710 STOP
0.1V/20μsec. div. 0.3Vp-p

AUTO FOCUS C.B.A.					
Transistor		IC705 IC706	C-11 ② A-4 ③	C737	B-9 ②
Q701	D-11 ②	Test Point TP704 TP704 TP709 TP709 TP710 TP710	B-3 ③ B-11 ② A-5 ③ A-10 ② B-4 ③ B-11 ②	Connector	
Q702	D-4 ③			B701 B701 P1 P701 P701 P703 P703 P704 P704 P705 P705	D-6 ③ D-8 ② A-2 ② C-1 ③ C-13 ② A-3 ③ A-11 ② A-4 ③ A-10 ② A-5 ③ A-10 ②
Q703	C-4 ③				
Q704	C-2 ③				
Q705	C-13 ②				
Q706	C-8 ②				
Q707	C-13 ②				
Q710	B-11 ②				
Q711	B-11 ②				
Integrated Circuit		Adjustment			
IC701	D-4 ③	VR701	C-2 ③		
IC702	B-6 ③	VR702	C-1 ③		
IC703	D-13 ②	VR703	D-12 ②		
IC704	D-2 ③	C703	C-10 ②		

ADDRESS INFORMATION
②...COMPONENT SIDE
②...FOIL SIDE



M (REF. NO. 700 Series)

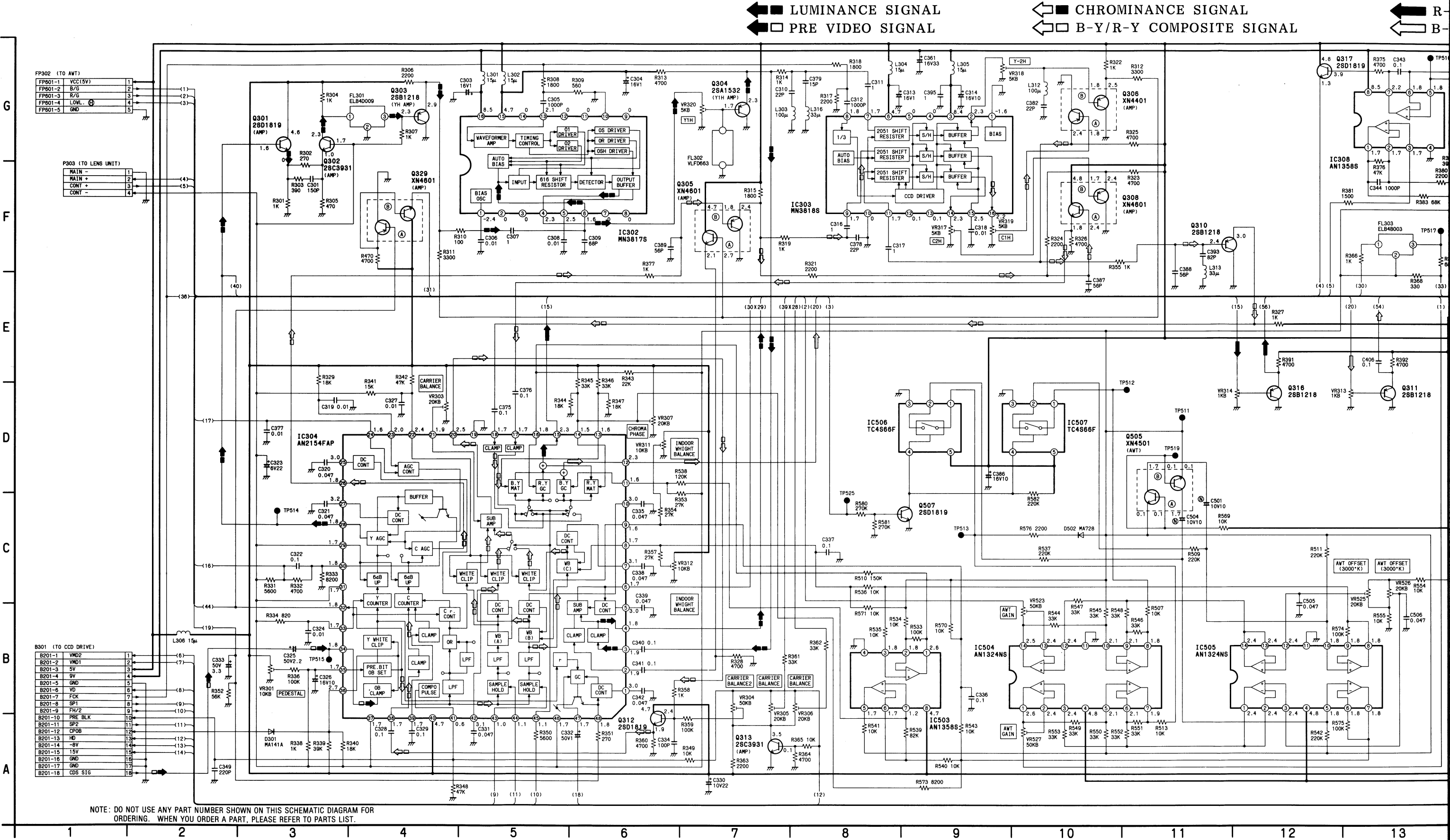


0.3Vp-p

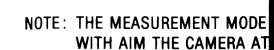
AUTO FOCUS C.B.A.					
Transistor		IC705	C-11 ①	C737	B-9 ②
Q701	D-11 ①	IC706	A-4 ②	Connector	
Q702	D-4 ②	Test Point		B701	D-6 ②
Q703	C-4 ②	TP704	B-3 ②	B701	D-8 ②
Q704	C-2 ②	TP704	B-11 ②	P1	A-2 ②
Q705	C-13 ②	TP709	A-5 ②	P701	C-1 ②
Q706	C-8 ②	TP709	A-10 ②	P701	C-13 ②
Q707	C-13 ②	TP710	B-4 ②	P703	A-3 ②
Q710	B-11 ②	TP710	B-11 ②	P703	A-11 ②
Q711	B-11 ②			P704	A-4 ②
Integrated Circuit		Adjustment		P704	A-10 ②
IC701	D-4 ②	VR701	C-2 ②	P704	A-10 ②
IC702	B-6 ②	VR702	C-1 ②	P705	A-5 ②
IC703	D-13 ②	VR703	D-12 ②	P705	A-10 ②
IC704	D-2 ②	C703	C-10 ②		

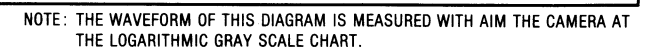
ADDRESS INFORMATION
②...COMPONENT SIDE
①...FOIL SIDE

3-19. PROCESS & DIGITAL MEMORY PACK SCHEMATIC DIAGRAM



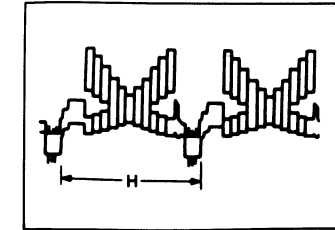
 R-Y SIGNAL
 B-Y SIGNAL



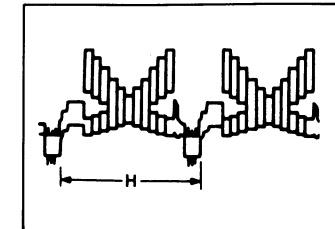


3-20. PROCESS C.B.A. (VEP23094B) & DIGITAL MEMORY PACK C.B.A. (VEP26058A)

PROCESS CIRCUIT TP (Test Point)
WAVEFORM (REF. NO. 500 Series)



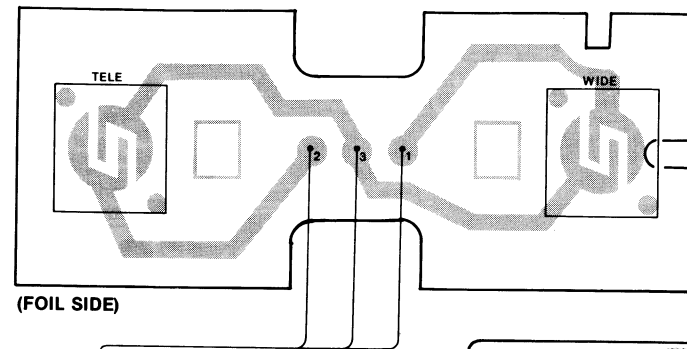
TP514 STOP
0.1V/20μsec. div. 0.32Vp-p



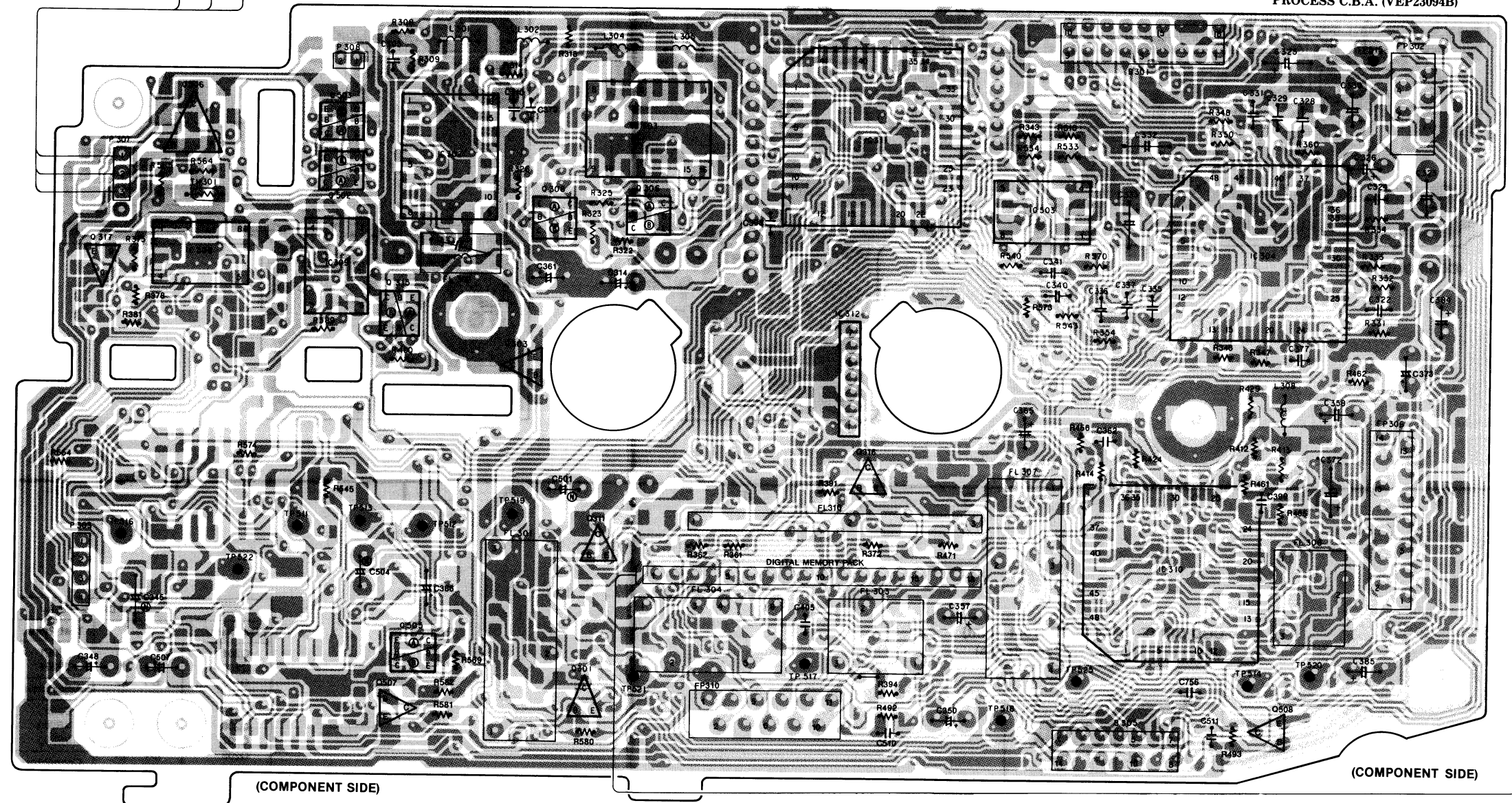
TP515 STOP
0.1V/20μsec. div. 0.45Vp-p

F
E
D
C
B
A

ZOOZ SW C.B.A. (VEK3971)



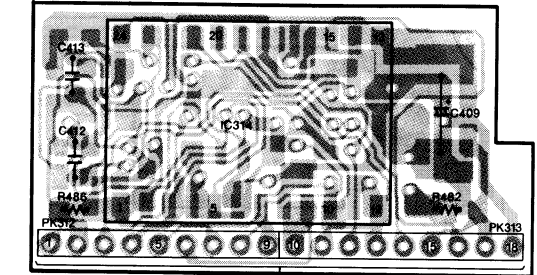
(FOIL SIDE)



PROCESS C.B.A. (VEP23094B)

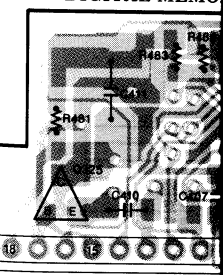
(COMPONENT SIDE)

DIGITAL MEMORY PACK C.B.A. (VEP26058A)



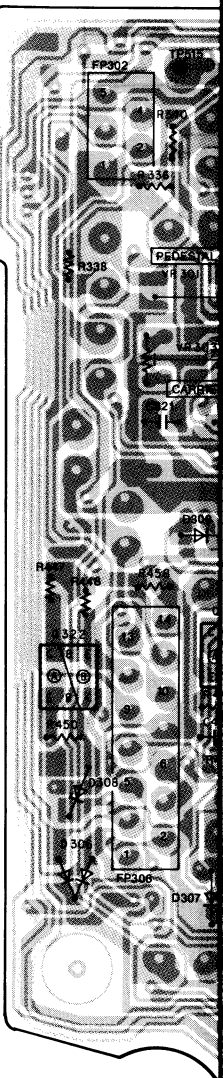
(COMPONENT SIDE)

DIGITAL MEMO



(COMPONENT SIDE)

PROCESS C.B.A. (VEP23094B)



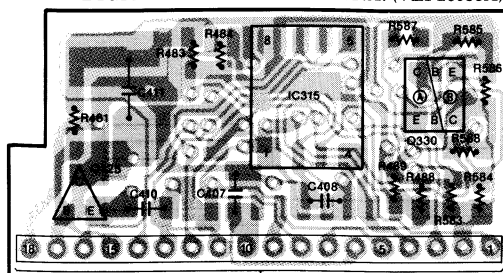
(FOIL SIDE)

1 2 3 4 5 6 7 8 9

P26058A)

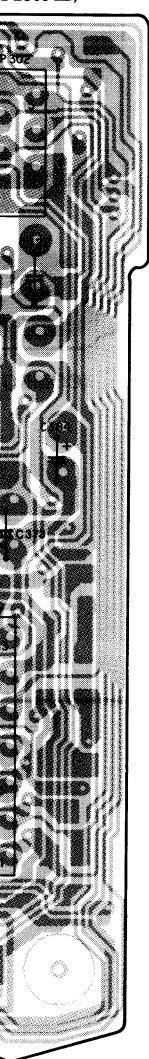


DIGITAL MEMORY PACK C.B.A. (VEP26058A)



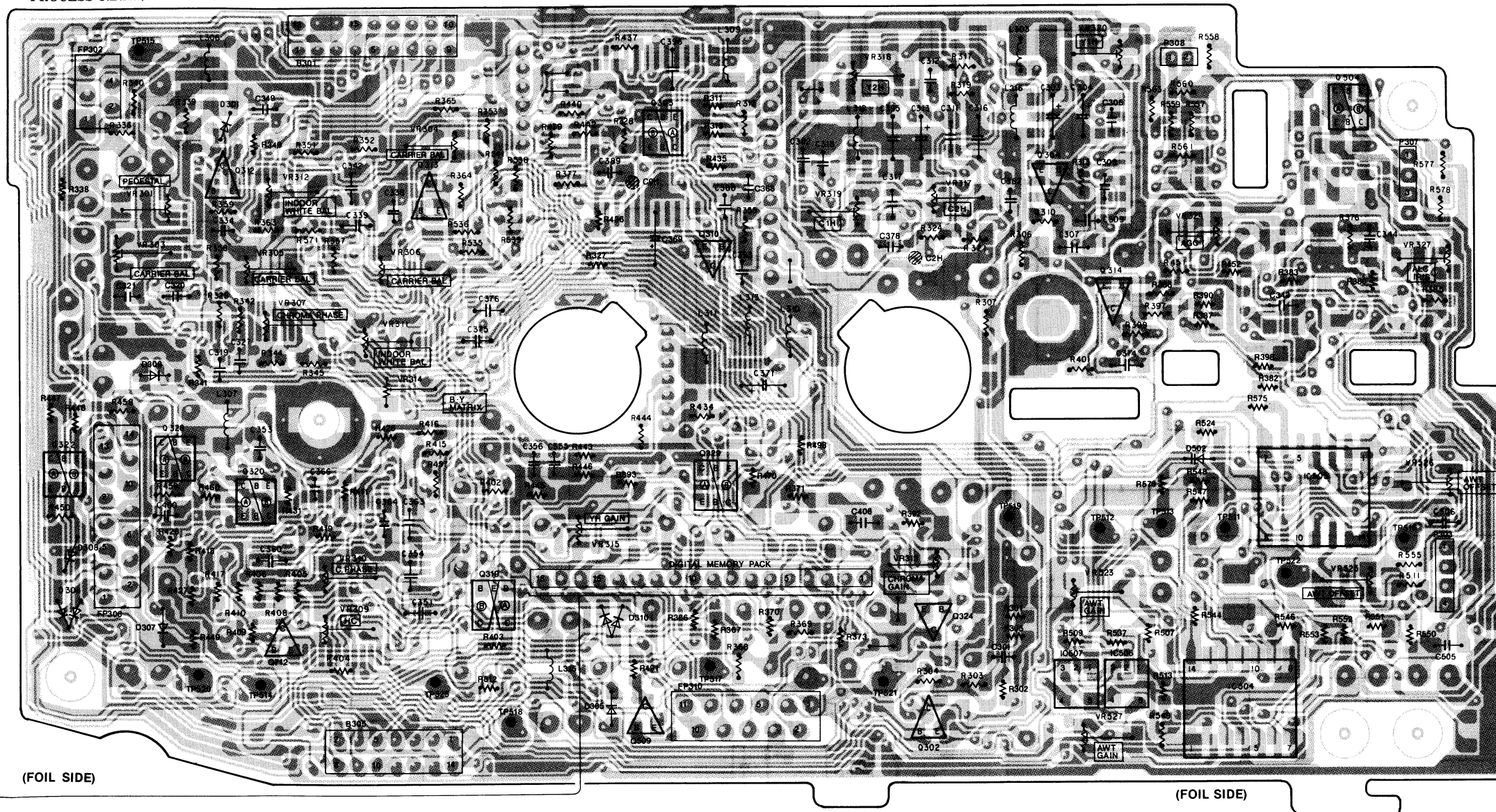
(FOIL SIDE)

P23094B)



COMPONENT SIDE)

PROCESS C.B.A. (VEP23094B)



(FOIL SIDE)

(FOIL SIDE)

PROCESS C.B.A.

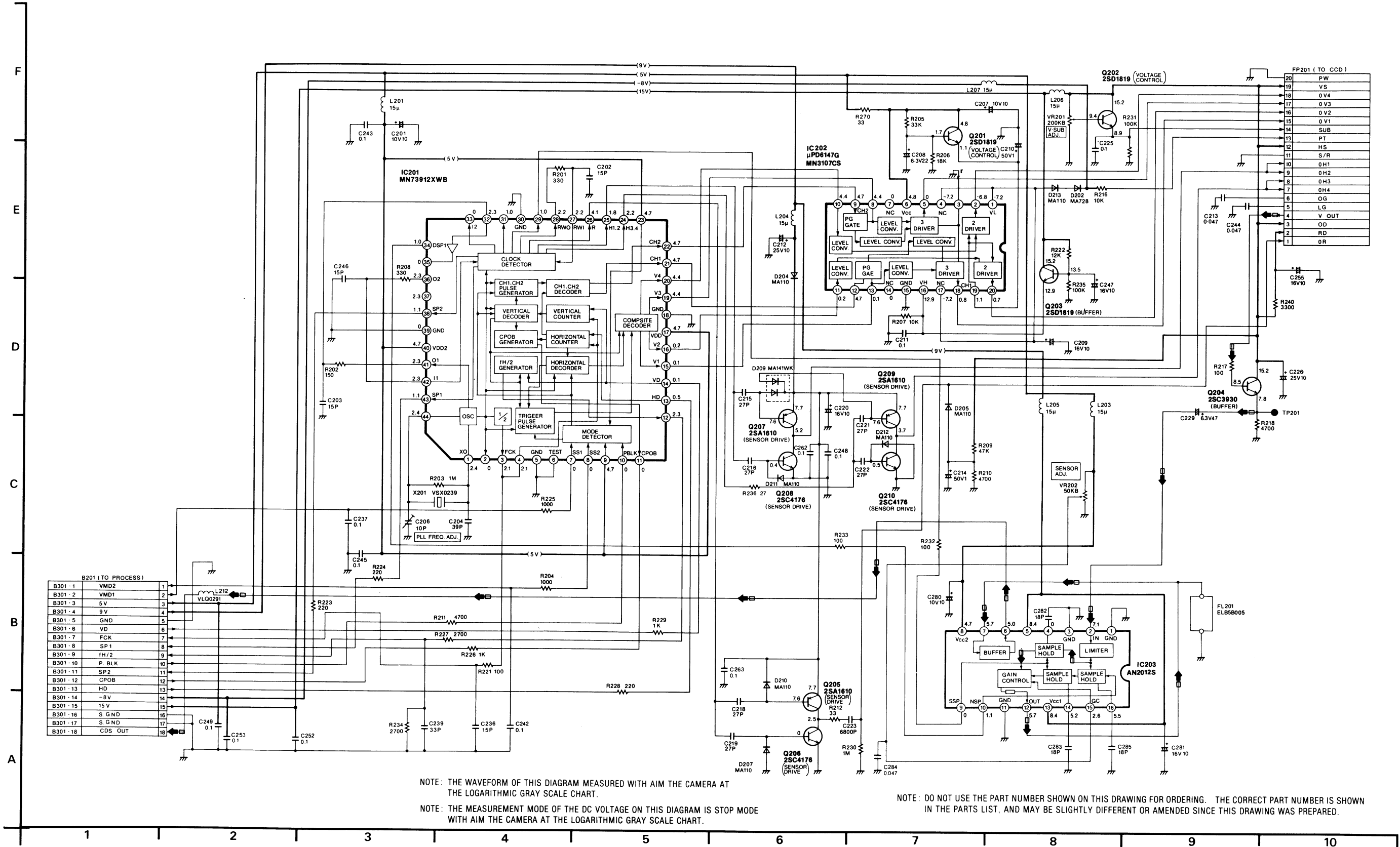
Transistor		TP515		E-10	
Q301	A-4	TP516	B-1	TP517	B-16
Q302	A-14	TP517	A-5	TP518	A-12
Q303	C-3	TP518	A-6	TP519	A-11
Q304	D-14	TP519	B-3	TP520	B-14
Q305	D-12	TP520	A-7	TP521	A-10
Q306	D-4	TP521	A-4	TP522	A-13
Q308	D-4	TP522	B-2	TP523	B-15
Q310	D-12	TP523	A-6	TP524	A-11
Q311	B-4	TP524	A-11	TP525	A-11
Q312	D-10	TP525	A-11		
Q313	D-11				
Q314	C-14				
Q315	C-3				
Q316	C-5				
Q317	D-1				
Q319	B-11				
Q320	B-10				
Q322	C-9				
Q324	B-14				
Q325	E-9				
Q328	C-10				
Q329	C-12				
Q330	F-10				
Q502	D-3				
Q503	D-3				
Q504	D-16				
Q505	B-3				
Q506	D-2				
Q507	A-3				
Q508	A-7				
Q509	A-12				
Q712	A-10				
Integrated Circuit		Adjustment		Connector	
IC302	D-3	VR301	D-10	B301	D-7
IC303	D-4	VR303	D-10	B301	D-10
IC304	C-7	VR304	D-11	B305	A-6
IC308	D-2	VR305	C-10	B305	A-11
IC309	C-3	VR306	C-11	FP302	E-8
IC310	B-7	VR307	C-10	FP302	D-9
IC311	D-5	VR309	B-11	FP306	C-8
IC312	C-5	VR310	B-11	FP306	B-9
IC314	F-7	VR311	C-11	FP310	A-4
IC315	F-10	VR312	D-10	FP310	A-12
IC503	D-6	VR313	B-13	P303	B-1
IC504	A-15	VR314	C-11	P303	B-16
IC505	B-15	VR315	B-12	P307	D-1
IC506	B-14	VR317	D-14	P307	D-16
IC507	B-14	VR318	D-13	P308	E-3
		VR319	D-13	P308	E-15
		VR320	E-14		
		VR324	D-15		
		VR327	D-16		
		VR523	B-14		
		VR525	B-16		
		VR526	B-16		
		VR527	A-14		
Test Point					
TP511	B-2				
TP512	B-15				
TP513	B-3				
TP514	B-14				
TP515	B-3				
TP516	B-15				
TP517	A-7				
TP518	A-10				
TP519	E-8				

ADDRESS INFORMATION

©...COMPONENT SIDE

©...FOIL SIDE

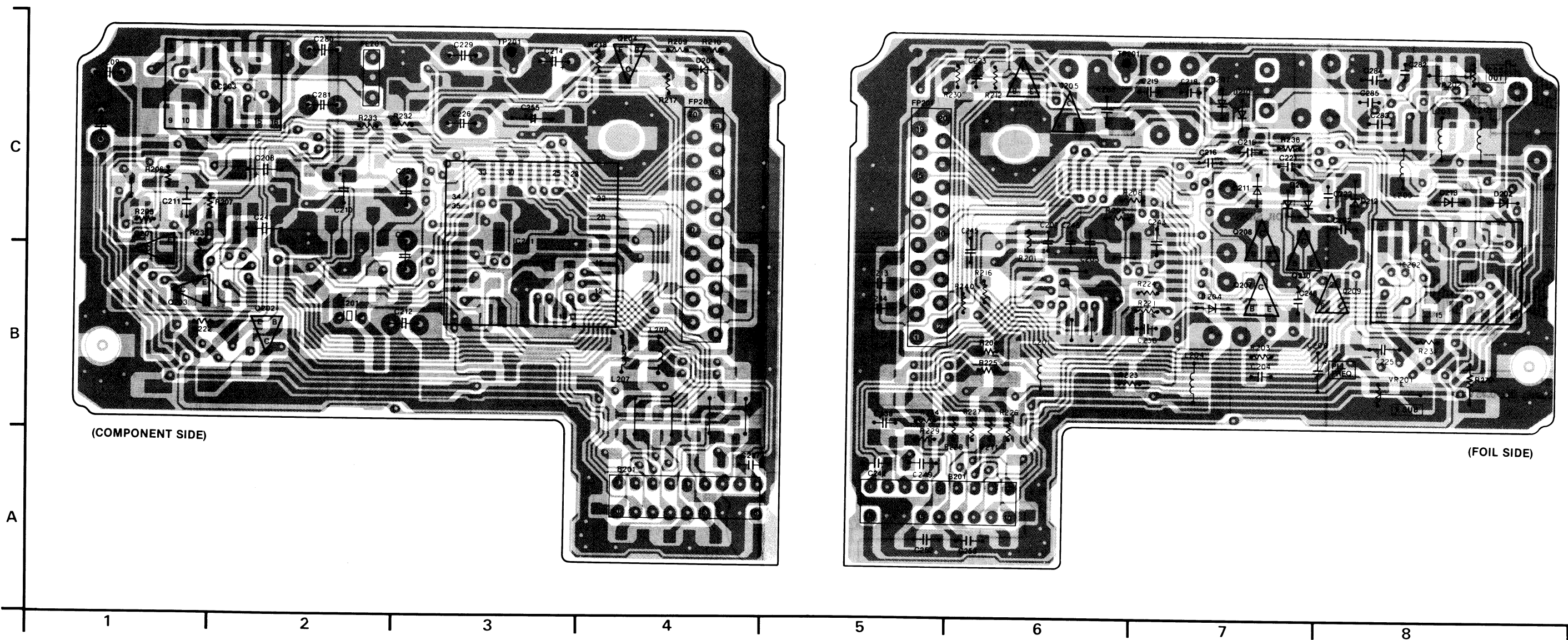
← PRE VIDEO SIGNAL



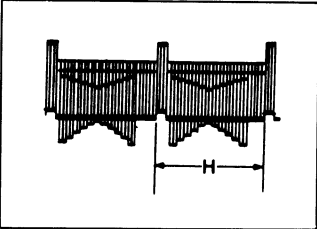
3-22. CCD DRIVE C.B.A. (VEP22082F)

TP201 (TO CCD)

PW
VS
OV4
OV3
OV2
OV1
SUB
PT
HS
S/R
QH1
QH2
QH3
QH4
OG
LG
V OUT
OD
RD
OR



CCD DRIVE CIRCUIT TP (Test Point)
WAVEFORM (REF. NO. 200 Series)

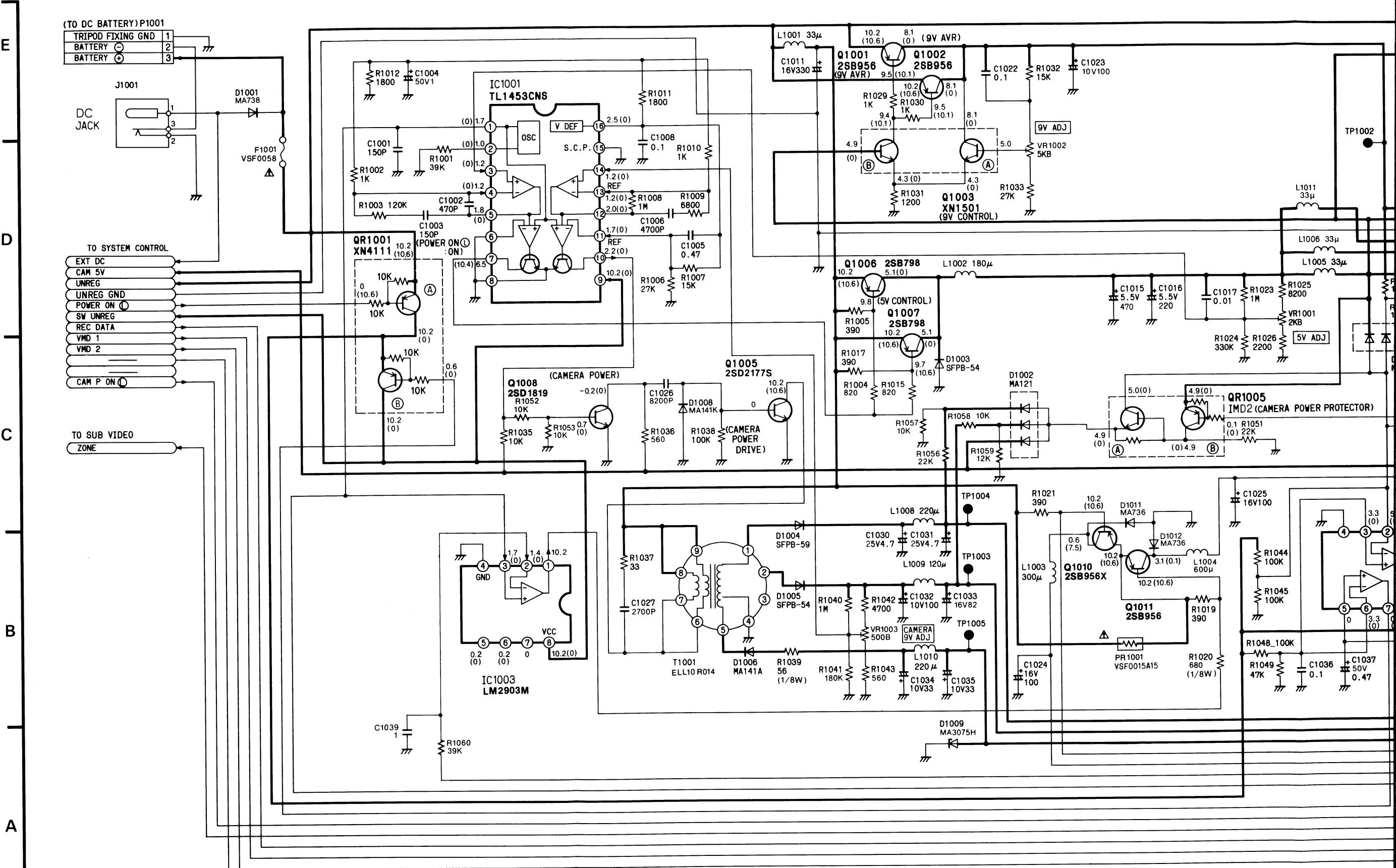


TP201 STOP
0.2V/20μsec. div. 0.8Vp-p

CCD DRIVE C.B.A.					
Transistor			Test Point		
Q201	C-1	⊙	TP201	C-3	⊙
Q202	B-2	⊙	TP201	C-6	⊙
Q203	B-1	⊙	Adjustment		
Q204	C-4	⊙			
Q205	C-6	⊙	C206	B-8	⊙
Q206	C-6	⊙	VR201	B-8	⊙
Q207	B-7	⊙	VR202	C-8	⊙
Q208	C-7	⊙	Connector		
Q209	B-8	⊙			
Q210	B-7	⊙	B201	A-4	⊙
Integrated Circuit			B201	A-6	⊙
			FP201	C-4	⊙
IC201	C-3	⊙	FP201	C-5	⊙
IC202	B-8	⊙			
IC203	C-2	⊙			

ADDRESS INFORMATION
⊙...COMPONENT SIDE
⊙...FOIL SIDE

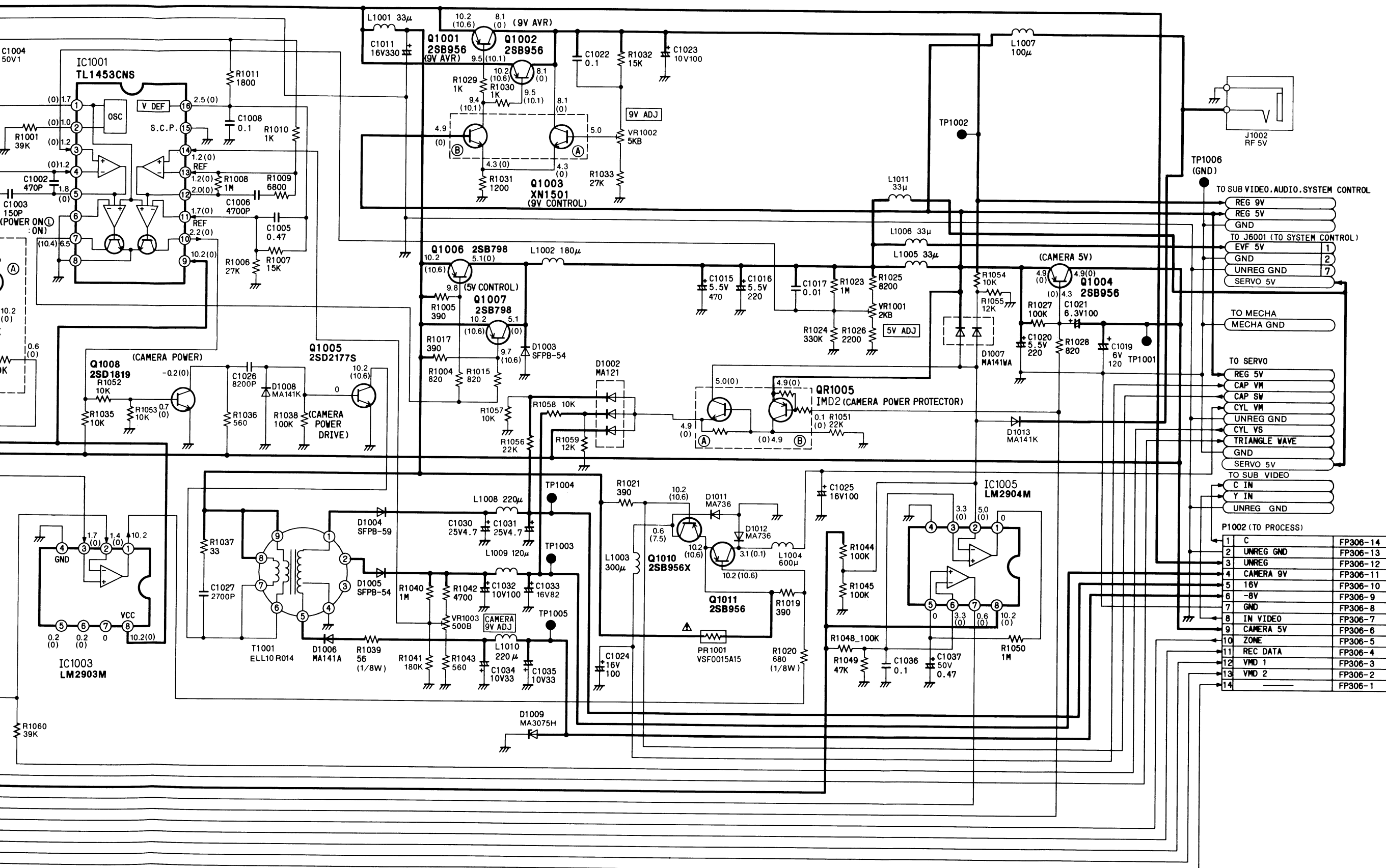
3-23. POWER SUPPLY SCHEMATIC DIAGRAM



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VO
THE MEASUREMENT MODE OF THE DC VO



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS POWER OFF MODE. THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.

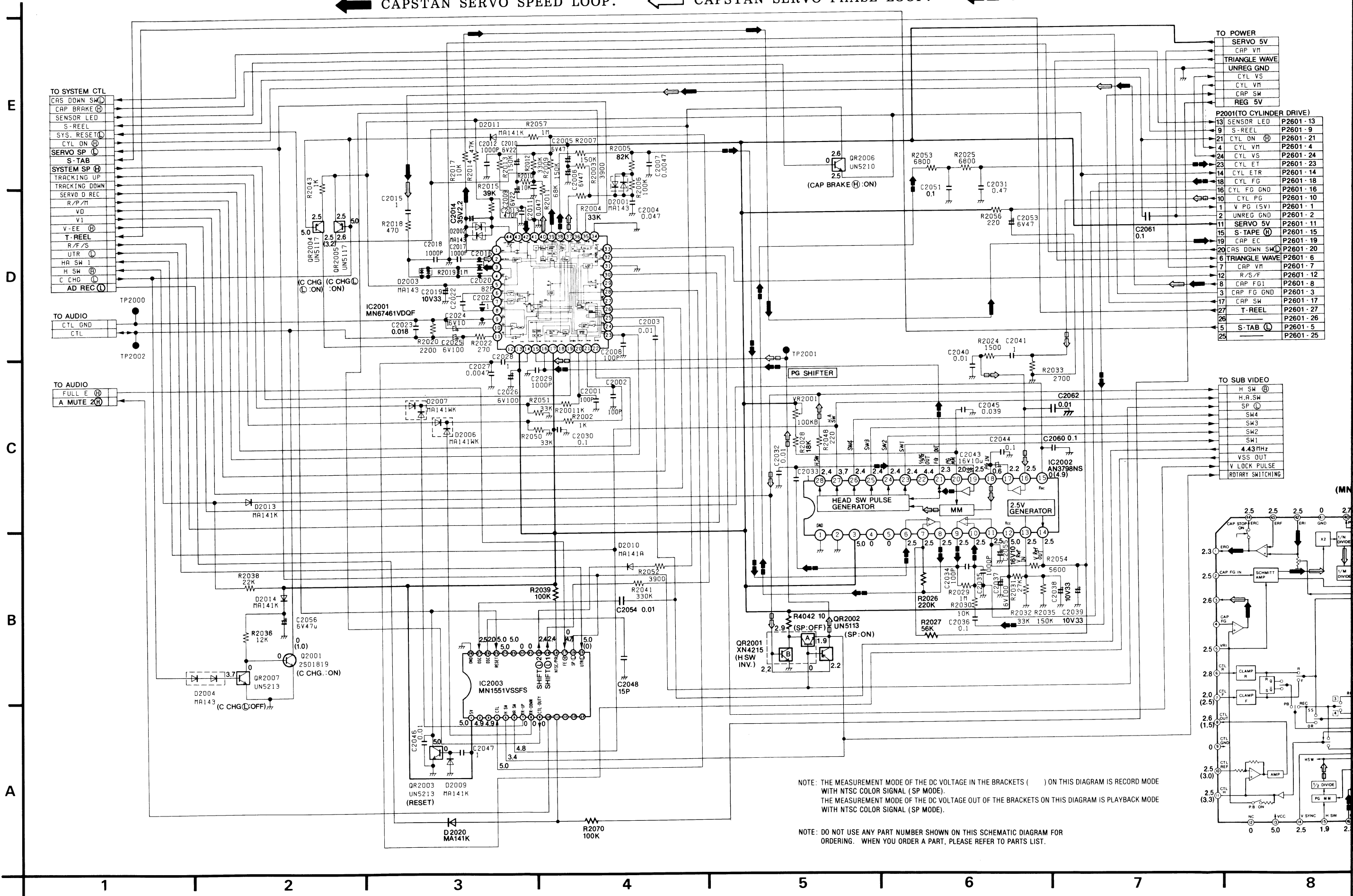
3-24. SERVO SCHEMATIC DIAGRAM

← CAPSTAN SERVO SPEED LOOP.

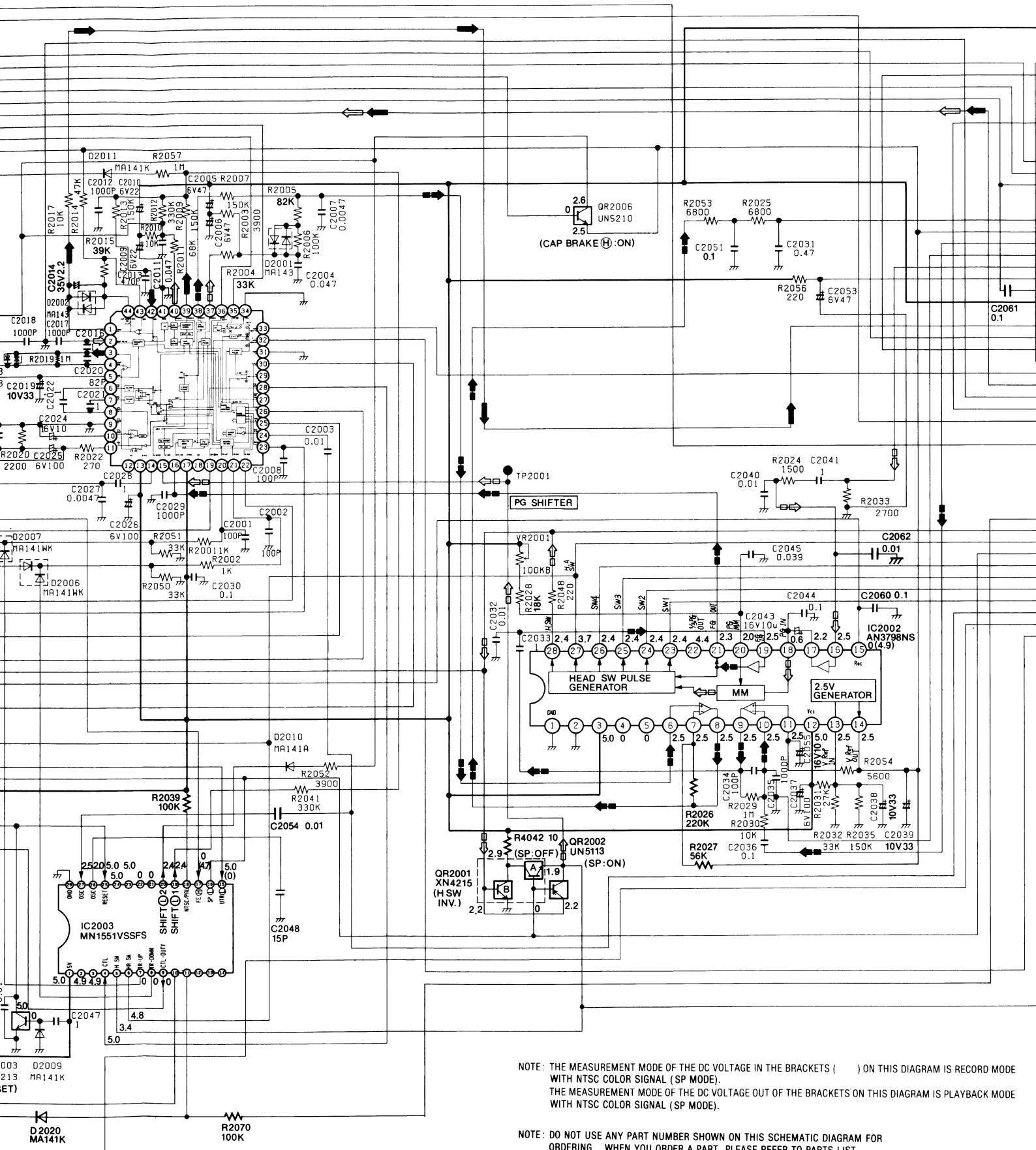
← CAPSTAN SERVO PHASE LOOP.

← CYLINDER SERVO SPEED LOOP.

← CYLINDER SERVO PHASE LOOP.

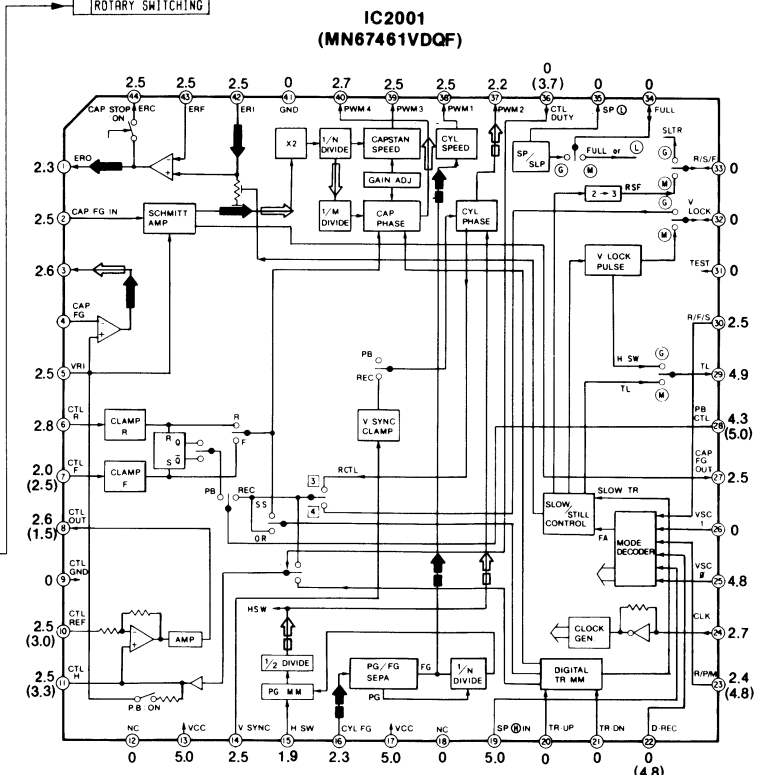


STAN SERVO SPEED LOOP. ← CAPSTAN SERVO PHASE LOOP. ← CYLINDER SERVO SPEED LOOP. ← CYLINDER SERVO PHASE LOOP.

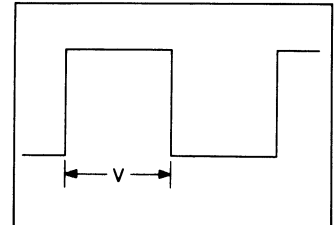


TO POWER	
SERVO 5V	
CAP VM	
TRIANGLE WAVE	
UNREG GND	
CYL VS	
CYL VM	
CAP SW	
REG 5V	
P2001(TO CYLINDER DRIVE)	
13 SENSOR LED	P2601-13
9 S-REEL	P2601-9
21 CYL ON (H)	P2601-21
4 CYL VM	P2601-4
24 CYL VS	P2601-24
23 CYL ET	P2601-23
14 CYL ETR	P2601-14
18 CYL FG	P2601-18
16 CYL FG GND	P2601-16
10 CYL PG	P2601-10
1 V PG (5V)	P2601-1
2 UNREG GND	P2601-2
11 SERVO 5V	P2601-11
15 S-TAPE (H)	P2601-15
19 CAP EC	P2601-19
20 CAS DOWN SW	P2601-20
6 TRIANGLE WAVE	P2601-6
7 CAP VM	P2601-7
12 R/S/F	P2601-12
8 CAP FG1	P2601-8
3 CAP FG GND	P2601-3
17 CAP SW	P2601-17
27 T-REEL	P2601-27
26	P2601-26
5 S-TAB (L)	P2601-5
25	P2601-25

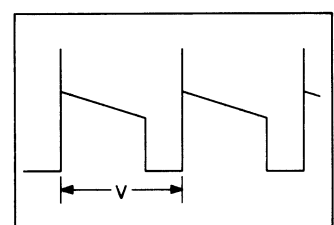
TO SUB VIDEO	
H SW (H)	
H.A.S.W	
SP (L)	
SW4	
SW3	
SW2	
SW1	
4.43MHz	
VSS OUT	
V LOCK PULSE	
ROTARY SWITCHING	



SERVO CIRCUIT TP (Test Point)
WAVEFORM (REF. NO. 2000 Series)

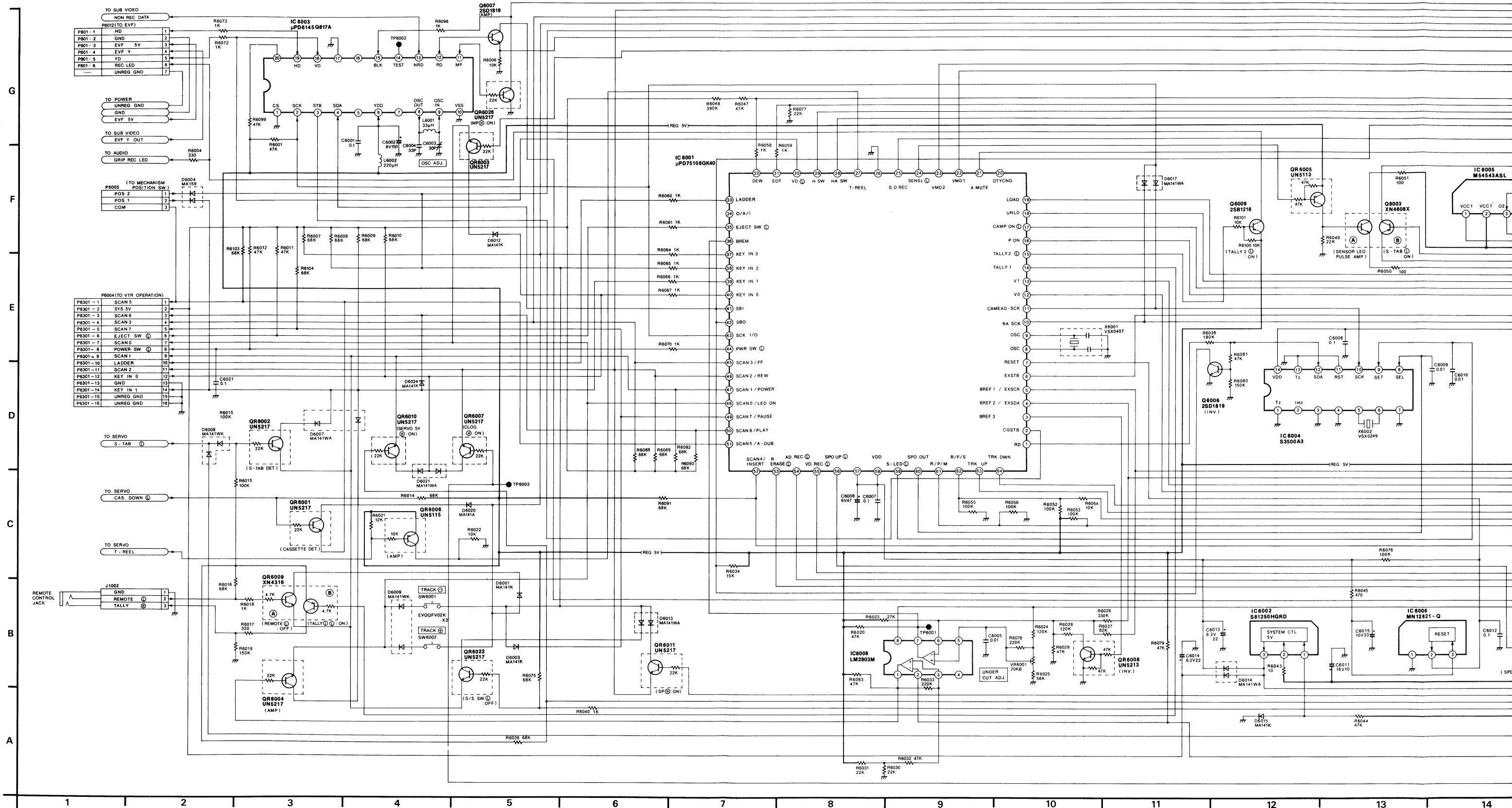


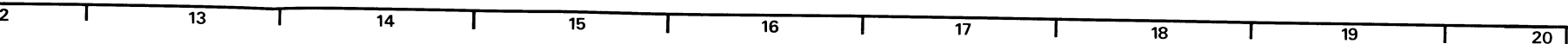
TP2001 REC/PLAY
1.0V/10msec. div. 3.4Vp-p



TP2002 REC
1.0V/10msec. div. 3.0Vp-p

3-25. SYSTEM CONTROL SCHEMATIC DIAGRAM

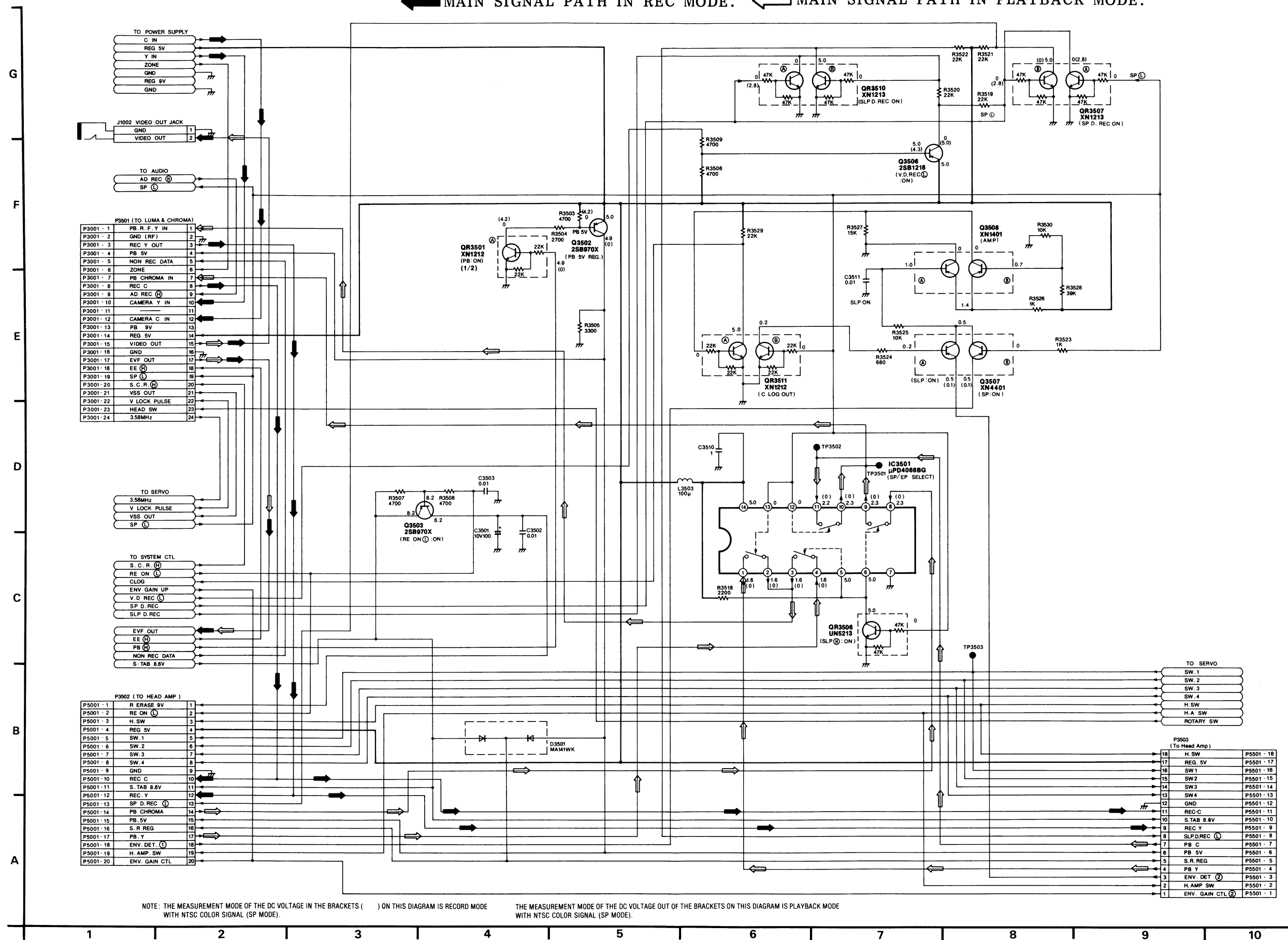




SYSTEM CONTROL TRANSISTORS VOLTAGE CHART (SP MODE)

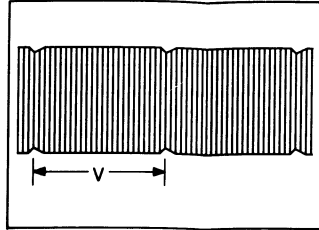
3-26. SUB VIDEO SCHEMATIC DIAGRAM

← MAIN SIGNAL PATH IN REC MODE. ← MAIN SIGNAL PATH IN PLAYBACK MODE.



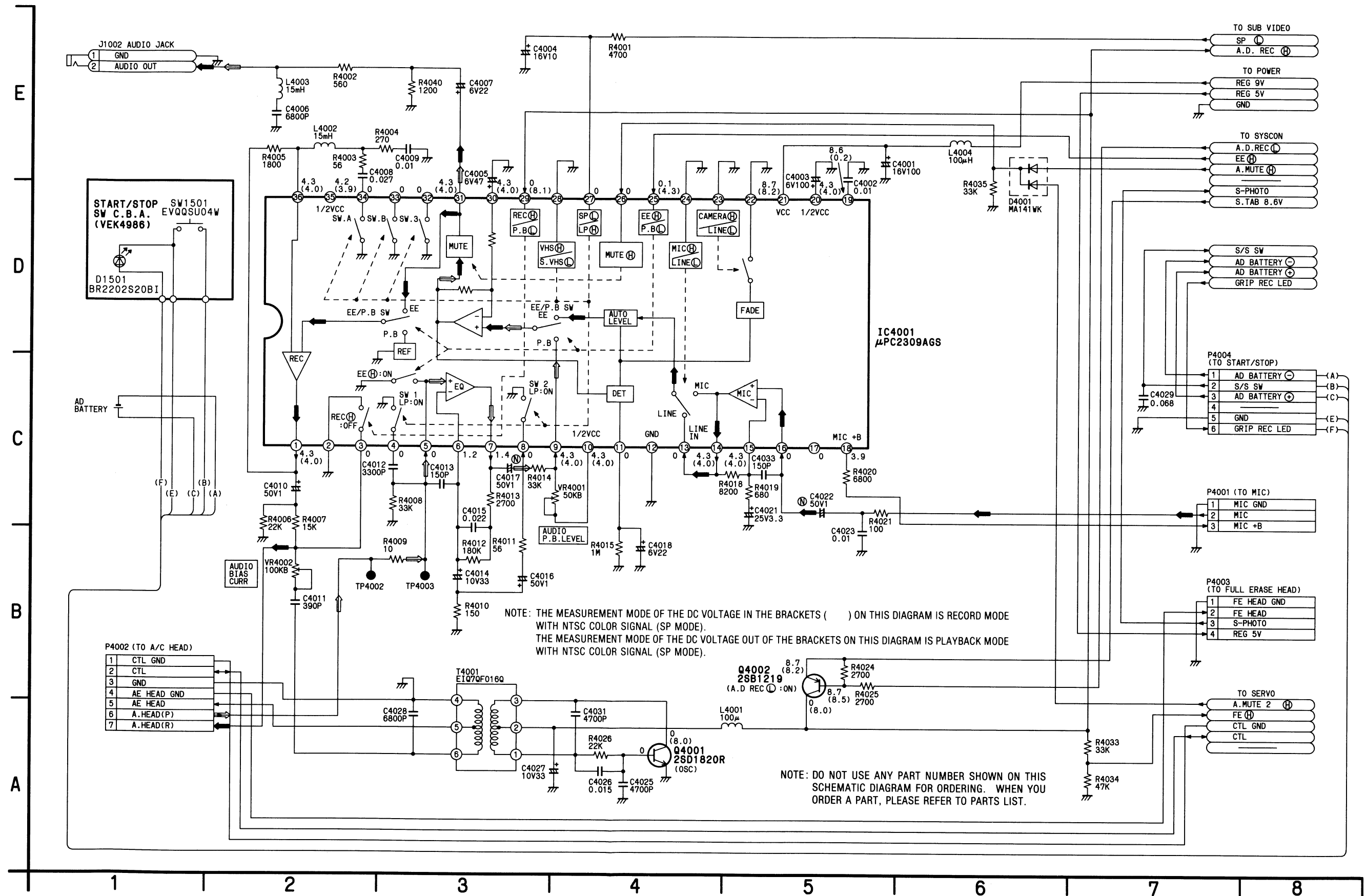
3-27. AUDIO SCHEMATIC DIAGRAM

SUB VIDEO CIRCUIT TP (Test Point)
WAVEFORM (REF. NO. 3500 Series)

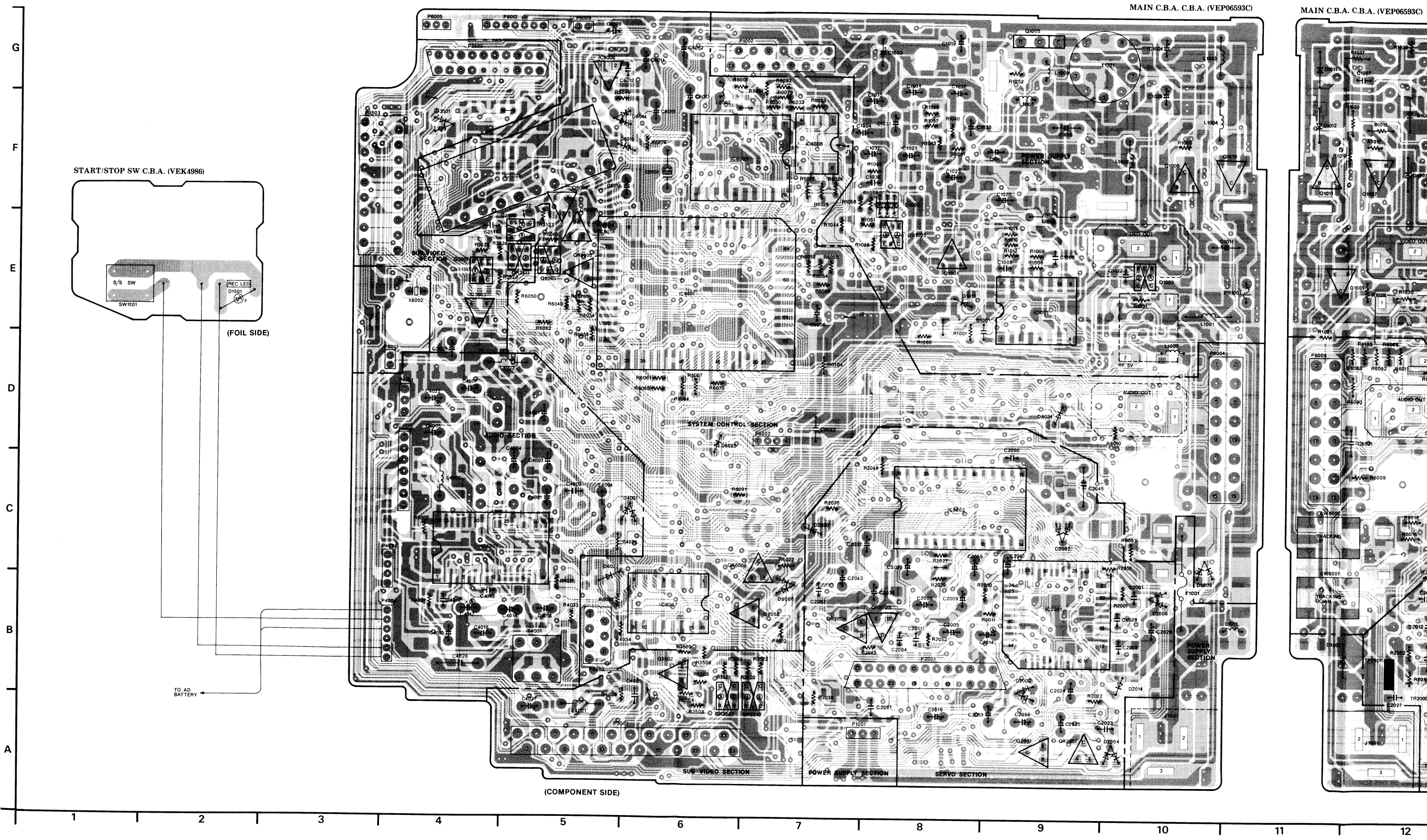


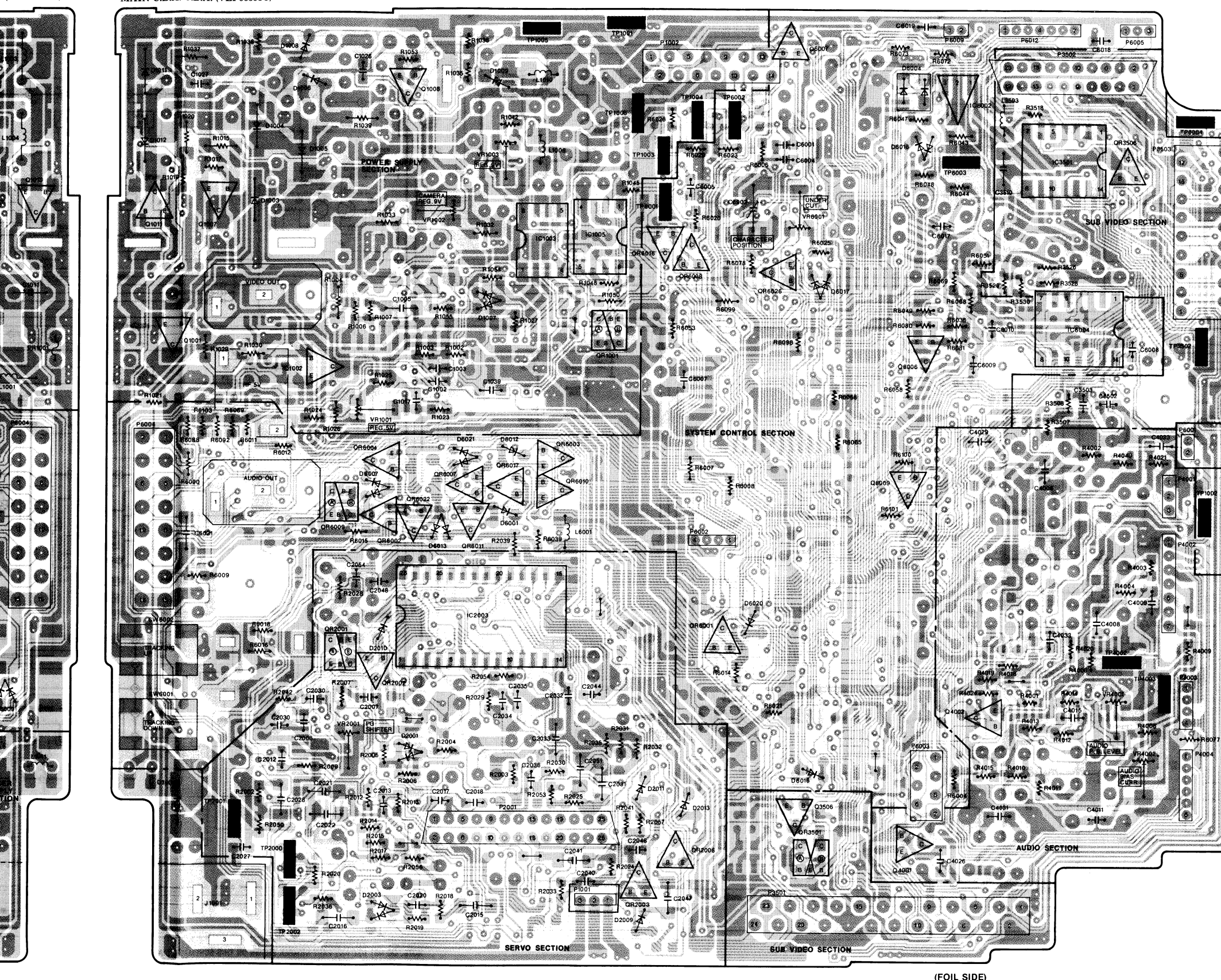
TP3501 PLAY
0.1V/10msec. div. 0.25Vp-p

← MAIN SIGNAL PATH IN REC MODE. ← MAIN SIGNAL PATH IN PLAYBACK MODE.



3-28. MAIN C.B.A. [POWER SUPPLY, SERVO, SUB VIDEO, AUDIO, SYSTEM CONTROL Section] (VEP06593C)





(FOIL SIDE)

SYSTEM CONTROL Section

Transistor		
Q6003	E-5	⊙
Q6005	F-5	⊙
Q6006	E-16	⊙
Q6007	G-16	⊙
Q6008	B-7	⊙
Q6009	D-16	⊙

Transistor & Resistor		
QR6001	C-15	⊙
QR6002	D-13	⊙
QR6003	D-14	⊙
QR6004	D-13	⊙
QR6005	E-5	⊙
QR6006	C-7	⊙
QR6007	D-13	⊙
QR6008	E-15	⊙
QR6009	D-13	⊙
QR6010	D-14	⊙
QR6011	D-14	⊙
QR6015	E-5	⊙
QR6016	E-15	⊙
QR6017	D-14	⊙
QR6022	D-13	⊙
QR6026	E-15	⊙

Integrated Circuit		
IC6001	E-6	⊙
IC6002	F-17	⊙
IC6003	F-6	⊙
IC6004	E-18	⊙
IC6005	F-5	⊙
IC6006	G-5	⊙
IC6007	B-6	⊙
IC6008	F-7	⊙

Test Point		
TP6001	F-15	⊙
TP6002	G-15	⊙
TP6003	F-17	⊙
TP6004	F-18	⊙

Adjustment		
C6003	F-15	⊙
VR6001	F-16	⊙

Connector		
P6001	D-18	⊙
P6001	D-4	⊙
P6002	D-7	⊙
P6002	D-15	⊙
P6003	B-17	⊙
P6003	B-5	⊙
P6004	D-10	⊙
P6004	D-11	⊙
P6005	G-18	⊙
P6005	G-4	⊙
P6009	G-17	⊙
P6009	G-5	⊙
P6012	G-17	⊙
P6012	G-5	⊙

ADDRESS INFORMATION
⊙...COMPONENT SIDE
⊙...FOIL SIDE

POWER SUPPLY Section

Transistor		
Q1001	E-12	⊙
Q1002	E-12	⊙
Q1003	E-10	⊙
Q1004	E-8	⊙
Q1005	G-9	⊙
Q1006	F-10	⊙
Q1007	F-12	⊙
Q1008	G-13	⊙
Q1010	F-11	⊙
Q1011	F-11	⊙

Transistor & Resistor		
QR1001	E-14	⊙
QR1005	E-8	⊙

Integrated Circuit		
IC1001	E-9	⊙
IC1003	F-14	⊙
IC1005	F-14	⊙

Test Point		
TP1001	G-14	⊙
TP1002	D-18	⊙
TP1003	F-15	⊙
TP1004	G-15	⊙
TP1005	G-14	⊙
TP1006	F-14	⊙

Adjustment		
VR1001	D-13	⊙
VR1002	F-13	⊙
VR1003	F-14	⊙

Connector		
P1001	A-14	⊙
P1001	A-8	⊙
P1002	G-15	⊙
P1002	G-6	⊙

ADDRESS INFORMATION
⊙...COMPONENT SIDE
⊙...FOIL SIDE

SERVO Section

Transistor		
Q2001	A-9	⊙

Transistor & Resistor		
QR2001	C-13	⊙
QR2002	C-13	⊙
QR2003	A-15	⊙
QR2004	B-7	⊙
QR2005	B-8	⊙
QR2006	B-15	⊙
QR2007	A-9	⊙

Integrated Circuit		
IC2001	B-9	⊙
IC2002	C-8	⊙
IC2003	C-14	⊙

Test Point		
TP2000	B-12	⊙
TP2001	B-12	⊙
TP2002	A-12	⊙

Adjustment		
VR2001	B-13	⊙

Connector		
P2001	B-14	⊙
P2001	B-8	⊙

ADDRESS INFORMATION
⊙...COMPONENT SIDE
⊙...FOIL SIDE

SUB VIDEO Section

Transistor		
Q3502	B-6	⊙
Q3503	E-4	⊙
Q3506	B-16	⊙
Q3507	E-4	⊙
Q3508	E-5	⊙

Transistor & Resistor		
QR3501	B-16	⊙
QR3506	F-18	⊙
QR3507	A-6	⊙
QR3510	A-7	⊙
QR3511	E-5	⊙

Integrated Circuit		
IC3501	F-17	⊙

Test Point		
TP3501	E-18	⊙
TP3502	E-8	⊙

Connector		
P3501	A-16	⊙
P3501	A-6	⊙
P3502	G-17	⊙
P3502	G-4	⊙
P3503	F-3	⊙
P3503	F-18	⊙

ADDRESS INFORMATION
⊙...COMPONENT SIDE
⊙...FOIL SIDE

AUDIO Section

Transistor		
Q4001	A-16	⊙
Q4002	B-17	⊙

Integrated Circuit		
IC4001	C-4	⊙

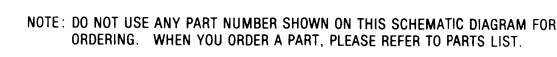
Test Point		
TP4002	C-18	⊙
TP4003	C-18	⊙

Adjustment		
VR4001	C-18	⊙
VR4002	B-18	⊙

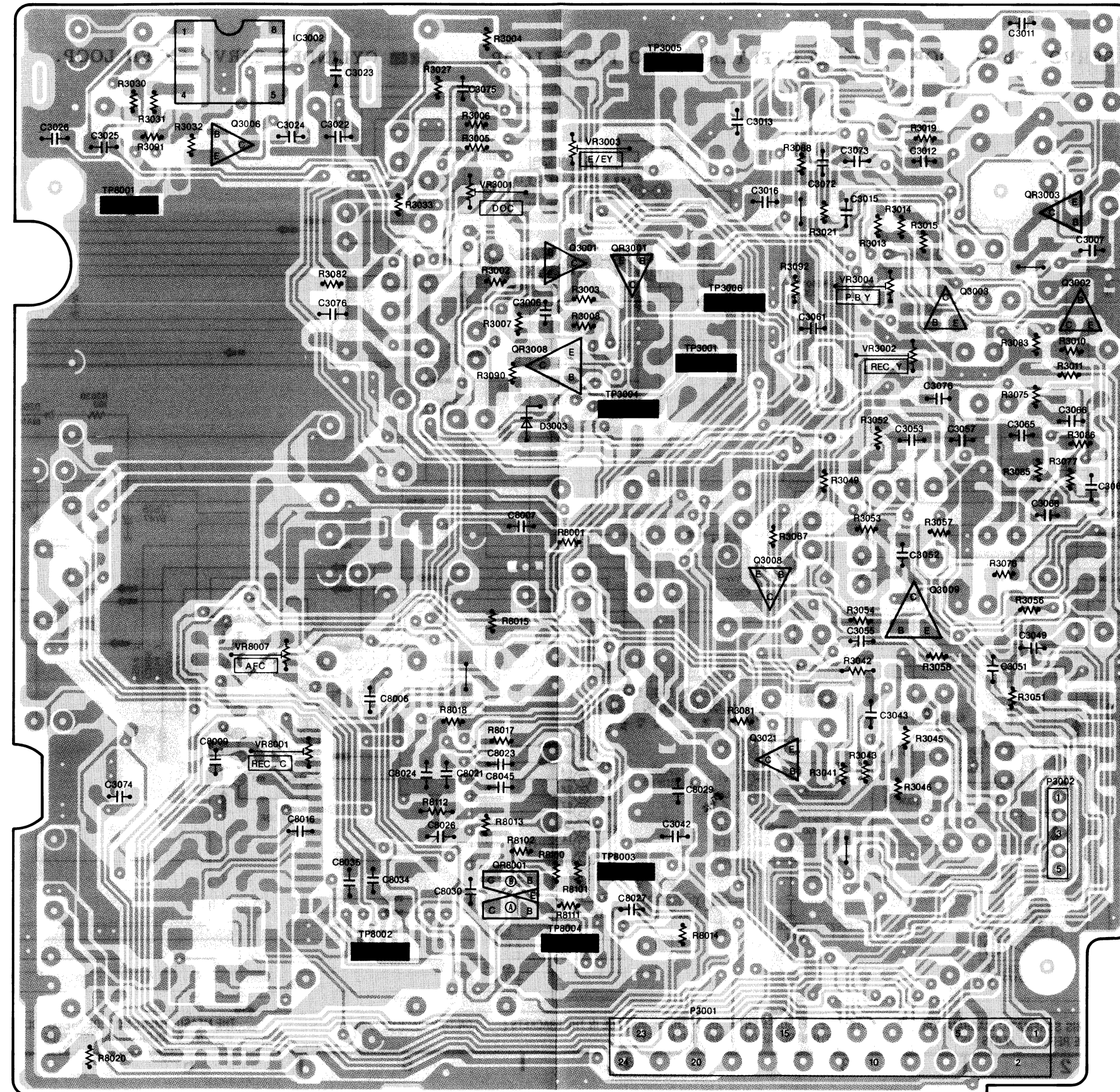
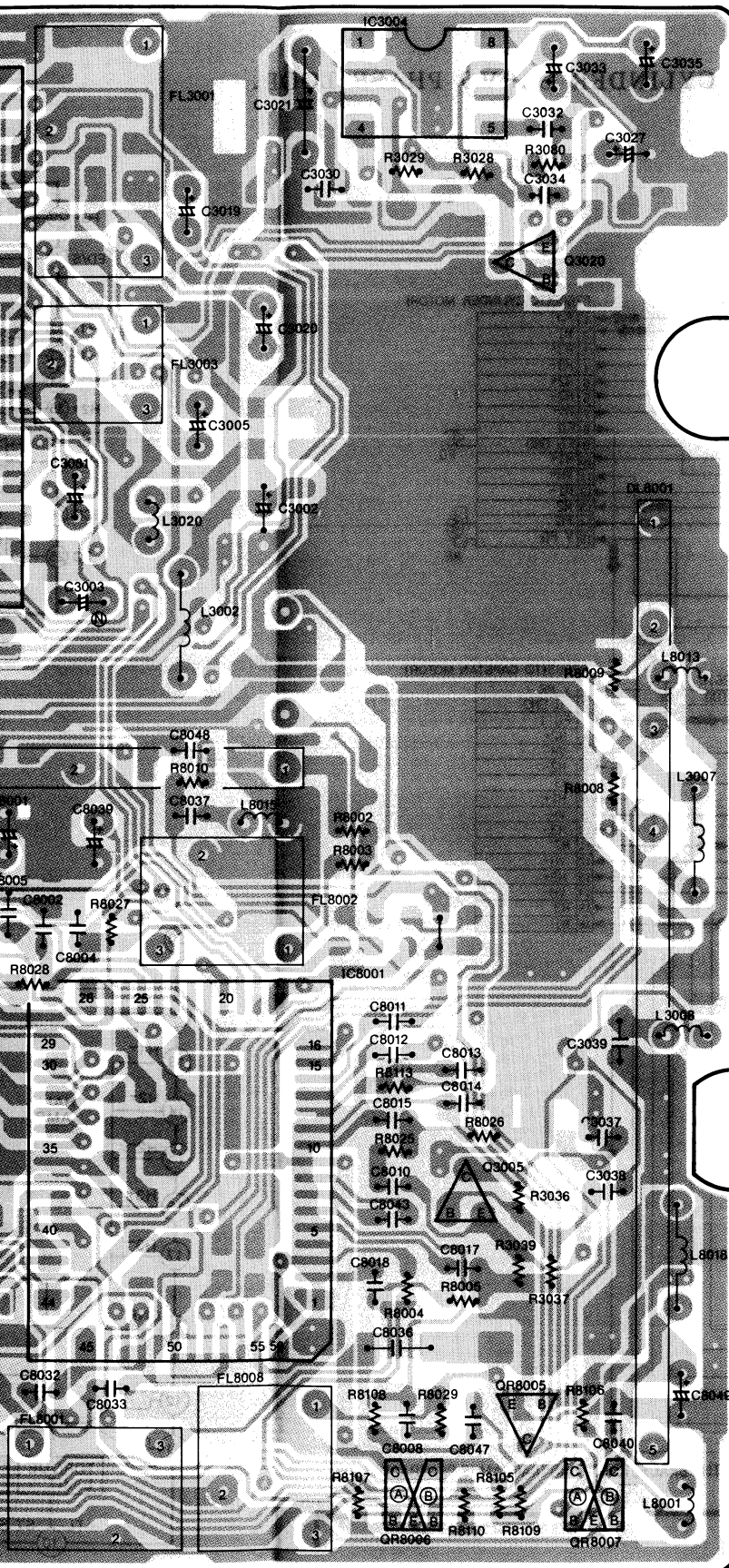
Connector		
P4001	D-18	⊙
P4001	D-4	⊙
P4002	D-18	⊙
P4002	D-4	⊙
P4003	C-18	⊙
P4003	C-4	⊙
P4004	B-18	⊙
P4004	B-4	⊙

ADDRESS INFORMATION
⊙...COMPONENT SIDE
⊙...FOIL SIDE

A vertical scale with labels A, B, C, D, E, F, G, and H from bottom to top. The scale is represented by a vertical line with horizontal tick marks at each label position.







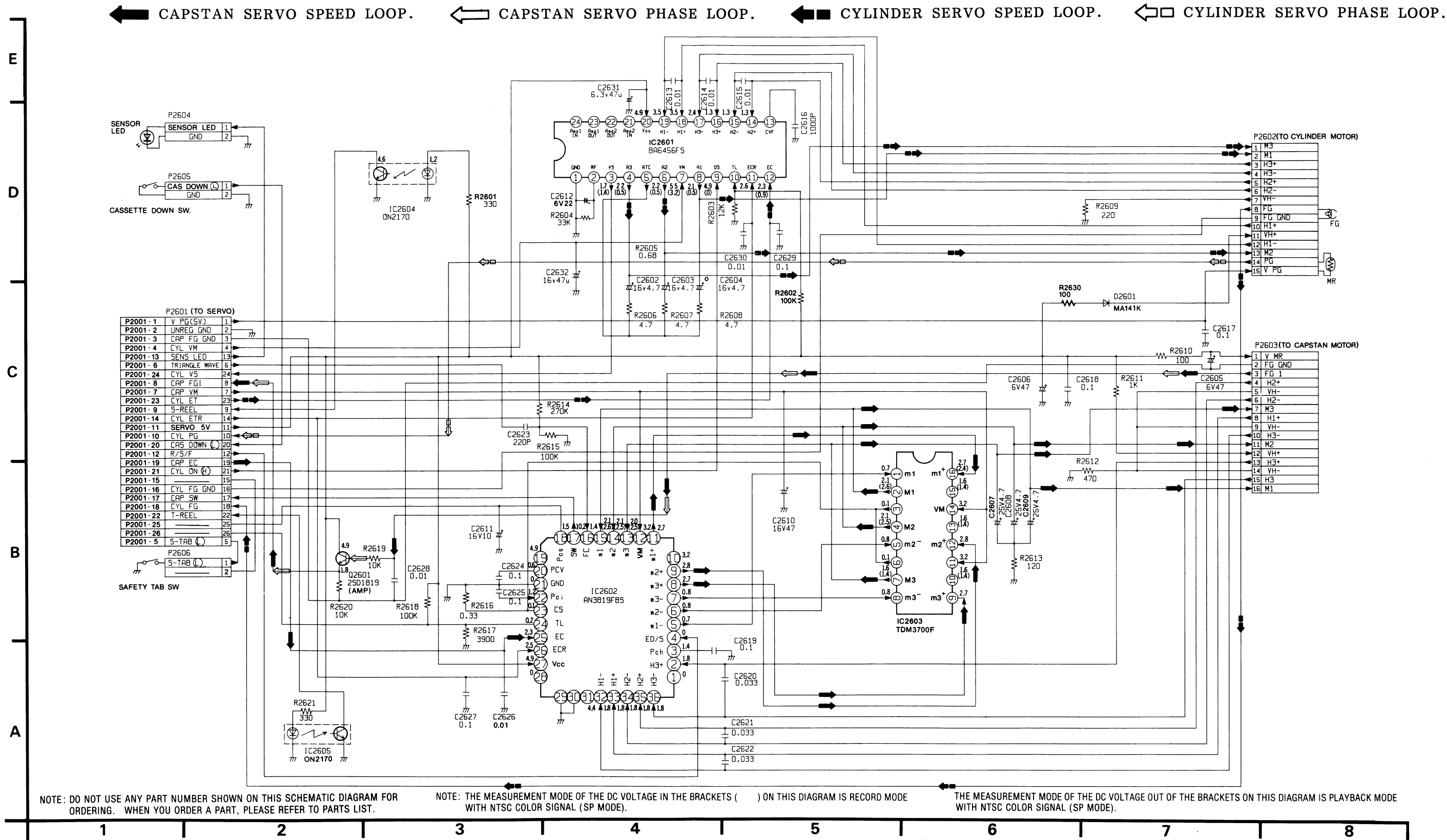
(FOIL SIDE)

LUMINANCE & CHROMINANCE C.B.A.		
Transistor		
Q3001	D-8	Ⓢ
Q3002	D-10	Ⓢ
Q3003	D-10	Ⓢ
Q3005	B-5	Ⓢ
Q3006	E-7	Ⓢ
Q3007	C-1	Ⓢ
Q3008	C-9	Ⓢ
Q3009	C-10	Ⓢ
Q3010	D-1	Ⓢ
Q3012	E-2	Ⓢ
Q3013	E-3	Ⓢ
Q3014	E-2	Ⓢ
Q3015	D-1	Ⓢ
Q3020	E-5	Ⓢ
Q3021	B-9	Ⓢ
Transistor & Resistor		
QR3001	D-9	Ⓢ
QR3003	E-10	Ⓢ
QR3004	E-3	Ⓢ
QR3007	C-1	Ⓢ
QR3008	D-8	Ⓢ
QR8001	B-8	Ⓢ
QR8005	A-5	Ⓢ
QR8006	A-5	Ⓢ
QR8007	A-5	Ⓢ
Integrated Circuit		
IC3001	E-3	Ⓢ
IC3002	E-7	Ⓢ
IC3003	B-2	Ⓢ
IC3004	E-5	Ⓢ
IC8001	C-4	Ⓢ
Test Point		
TP3001	D-9	Ⓢ
TP3004	D-8	Ⓢ
TP3005	E-9	Ⓢ
TP3006	E-6	Ⓢ
TP8001	D-9	Ⓢ
TP8002	A-7	Ⓢ
TP8003	B-8	Ⓢ
TP8004	A-8	Ⓢ
Adjustment		
VR3001	E-8	Ⓢ
VR3002	D-10	Ⓢ
VR3003	E-8	Ⓢ
VR3004	D-10	Ⓢ
VR8001	B-7	Ⓢ
VR8007	C-7	Ⓢ
Connector		
P3001	A-2	Ⓢ
P3001	A-9	Ⓢ
P3002	B-1	Ⓢ
P3002	B-10	Ⓢ

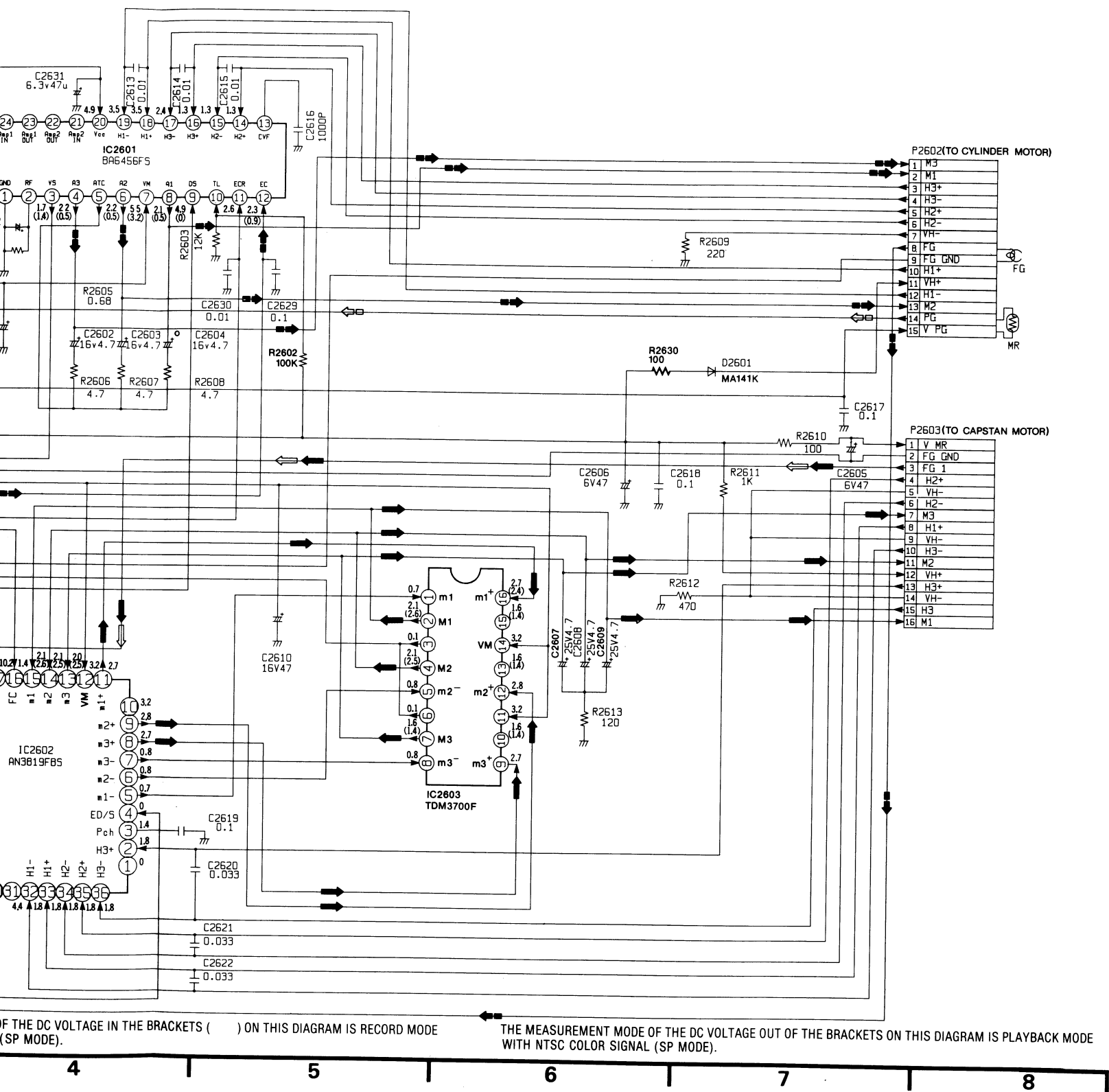
ADDRESS INFORMATION
Ⓢ...COMPONENT SIDE
Ⓢ...FOIL SIDE

3-31. MOTOR DRIVE SCHEMATIC DIAGRAM

IC BLOCK

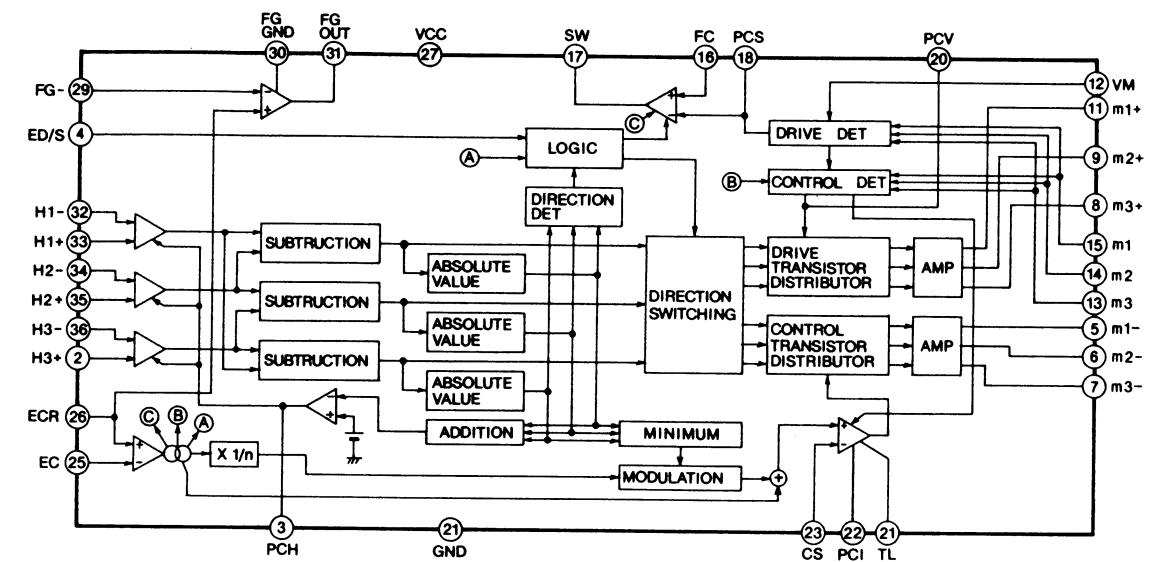


SERVO PHASE LOOP. ← CYLINDER SERVO SPEED LOOP. ← CYLINDER SERVO PHASE LOOP.

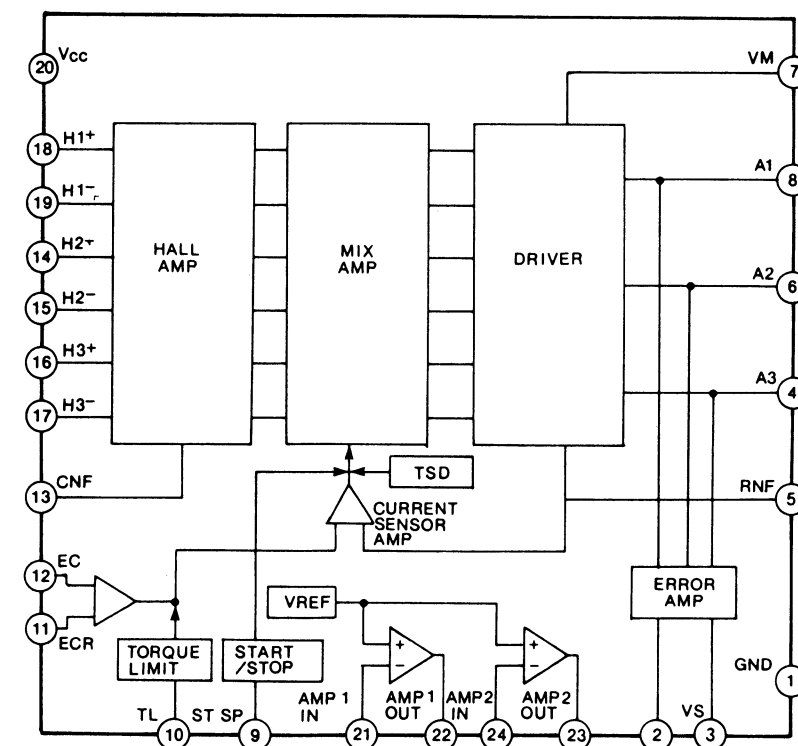


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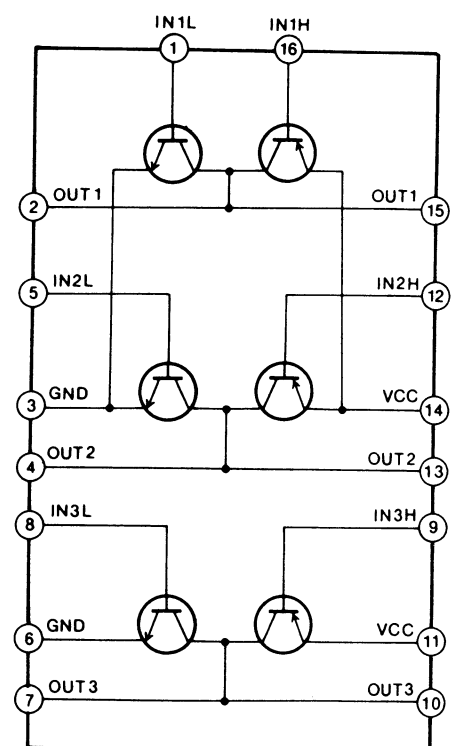
IC2601 (AN3819FBS)



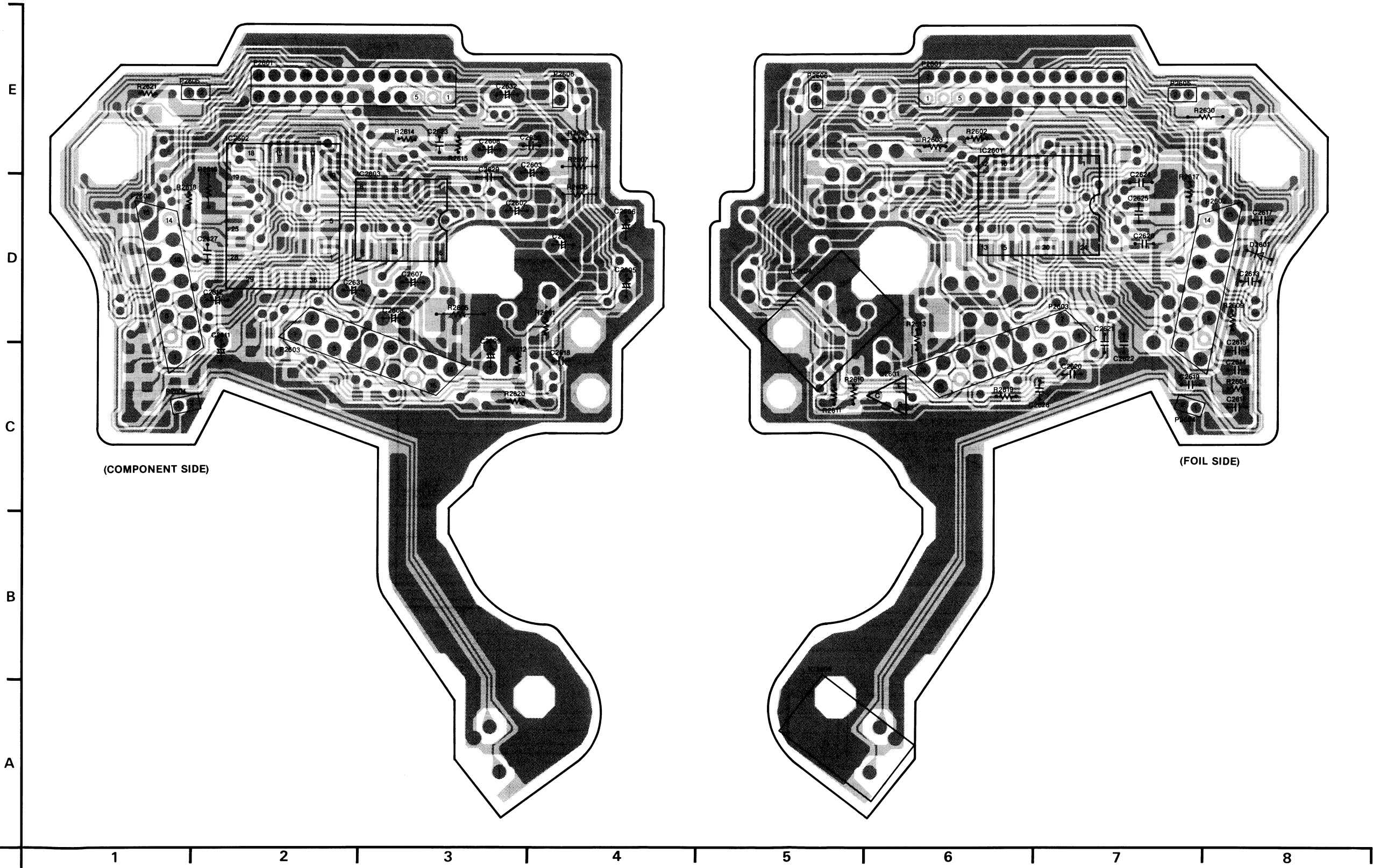
IC2601 (BA6456FS)



IC2603 (TDM3700TP1)



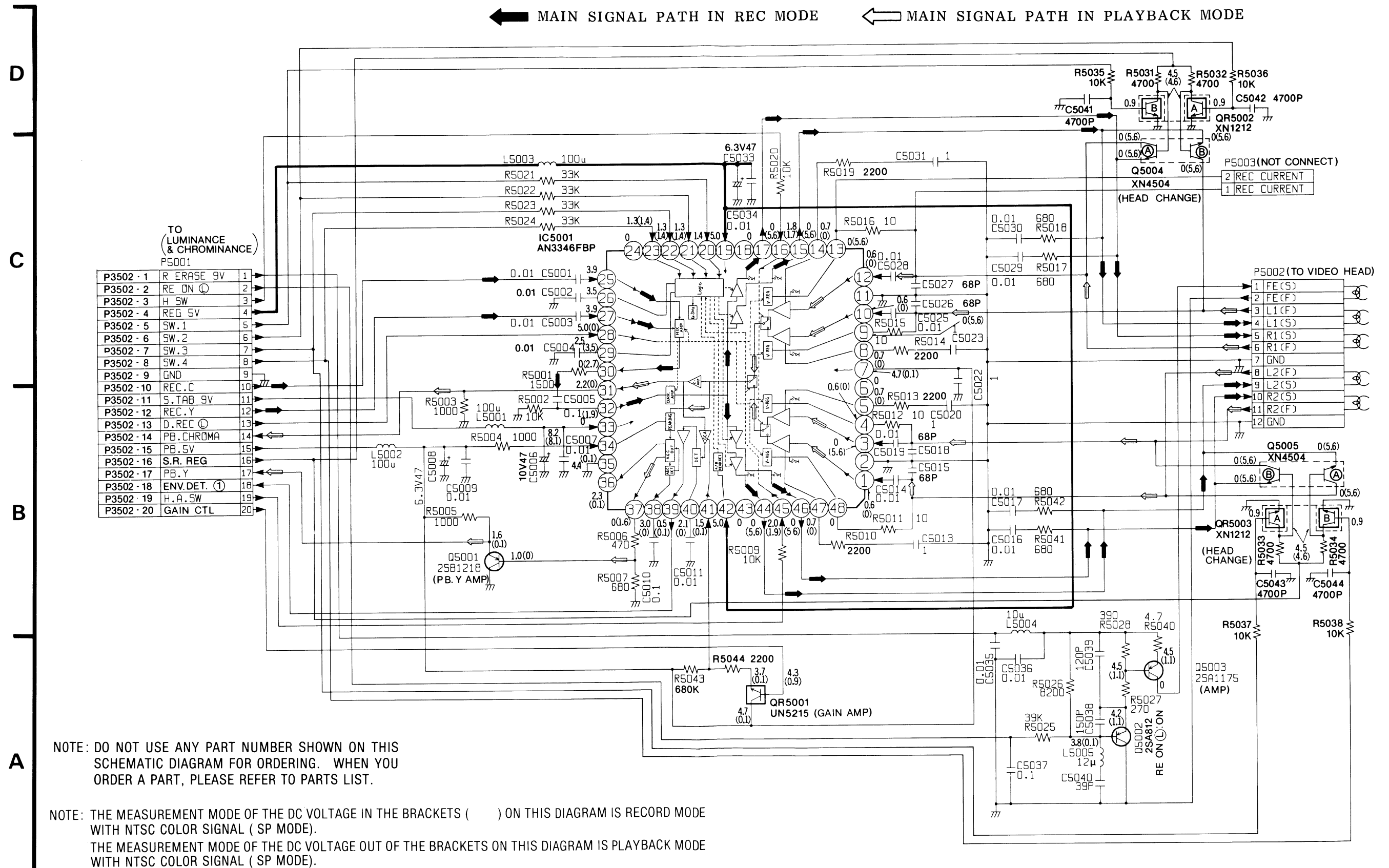
3-32. MOTOR DRIVE C.B.A. (VEP02349A)



MOTOR DRIVE C.B.A.		
Transistor		
Q2601	C-6	Ⓢ
Integrated Circuit		
IC2601	D-6	Ⓢ
IC2602	E-2	Ⓢ
IC2603	D-3	Ⓢ
IC2604	D-5	Ⓢ
IC2605	A-5	Ⓢ
Connector		
P2601	E-2	Ⓢ
P2601	E-6	Ⓢ
P2602	D-1	Ⓢ
P2602	D-8	Ⓢ
P2603	C-2	Ⓢ
P2603	C-7	Ⓢ
P2604	C-1	Ⓢ
P2604	C-7	Ⓢ
P2605	E-1	Ⓢ
P2605	E-7	Ⓢ
P2606	E-4	Ⓢ
P2606	E-5	Ⓢ

ADDRESS INFORMATION
Ⓢ...COMPONENT SIDE
Ⓢ...FOIL SIDE

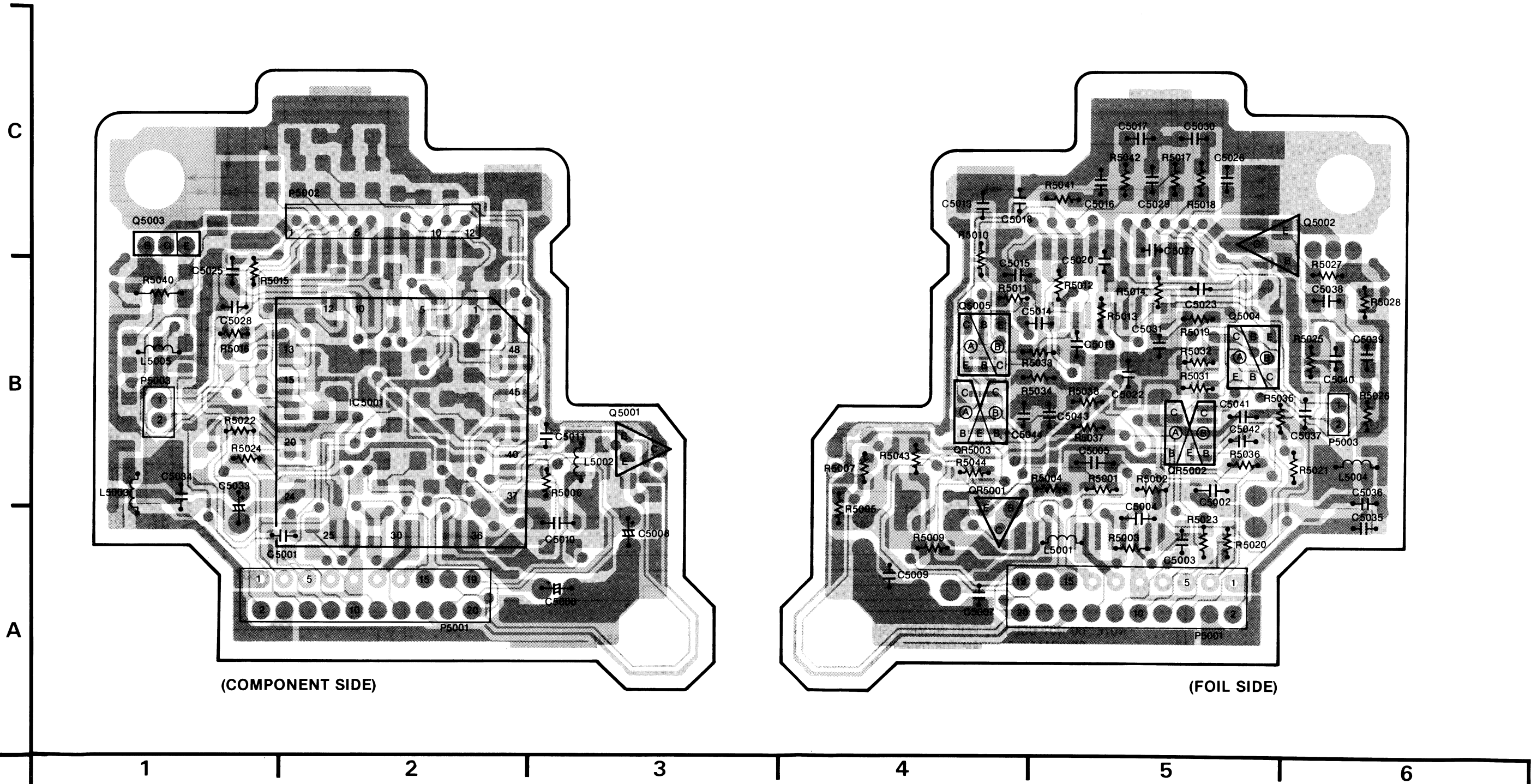
3-33. SP HEAD AMP SCHEMATIC DIAGRAM



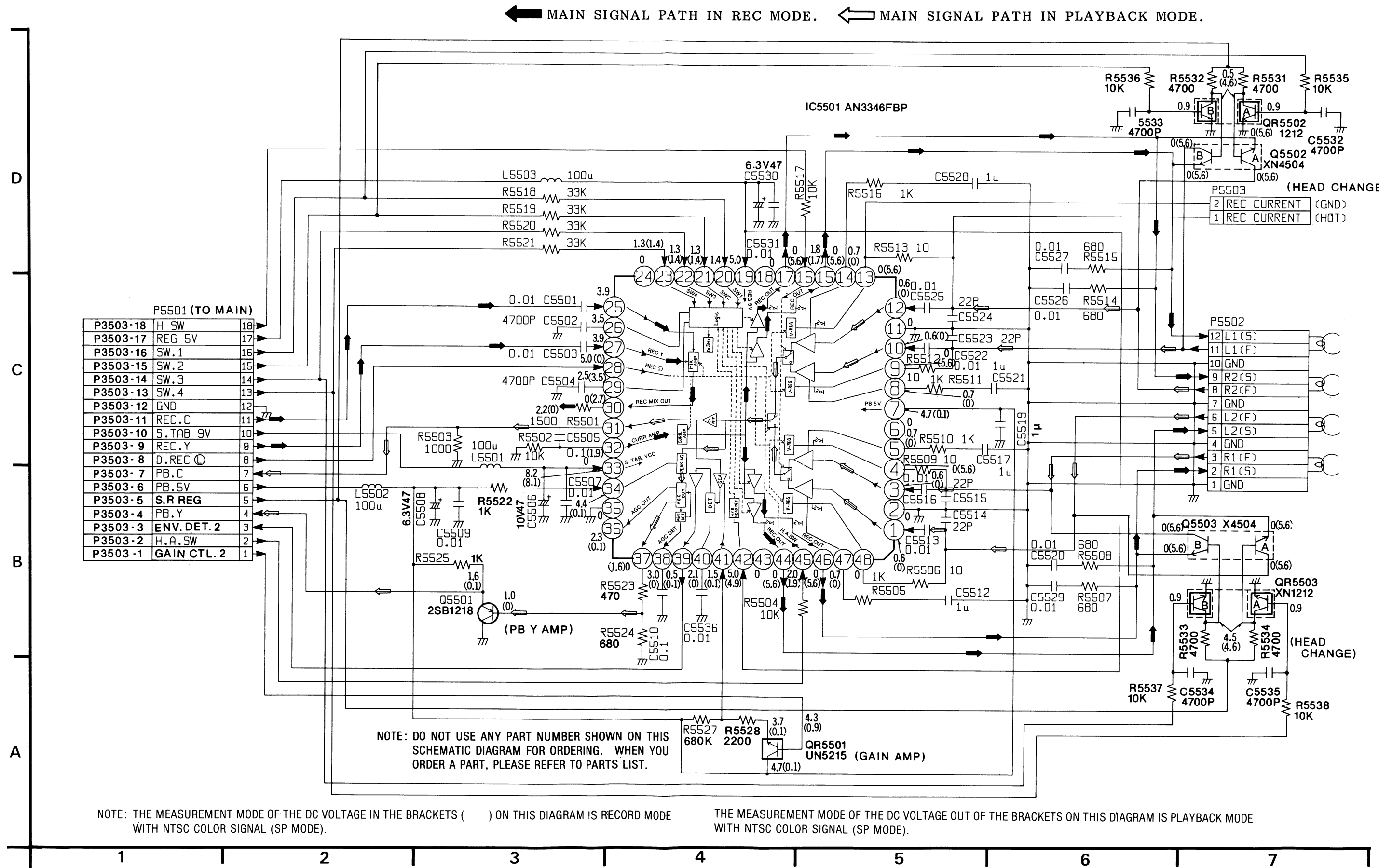
3-34. SP HEAD AMP C.B.A. (VEP05147A)

SP HEAD AMP C.B.A.					
Transistor			Integrated Circuit		
Q5001	B-3	⊙	IC5001	B-2	⊙
Q5002	C-6	⊙	Connector		
Q5003	C-1	⊙			
Q5004	B-5	⊙	P5001	A-2	⊙
Q5005	B-4	⊙	P5001	C-5	⊙
Transistor & Resistor			P5002	D-2	⊙
QR5001	B-4	⊙	P5003	B-1	⊙
QR5002	B-5	⊙	P5003	B-6	⊙
QR5003	B-4	⊙			

ADDRESS INFORMATION
⊙...COMPONENT SIDE
⊙...FOIL SIDE



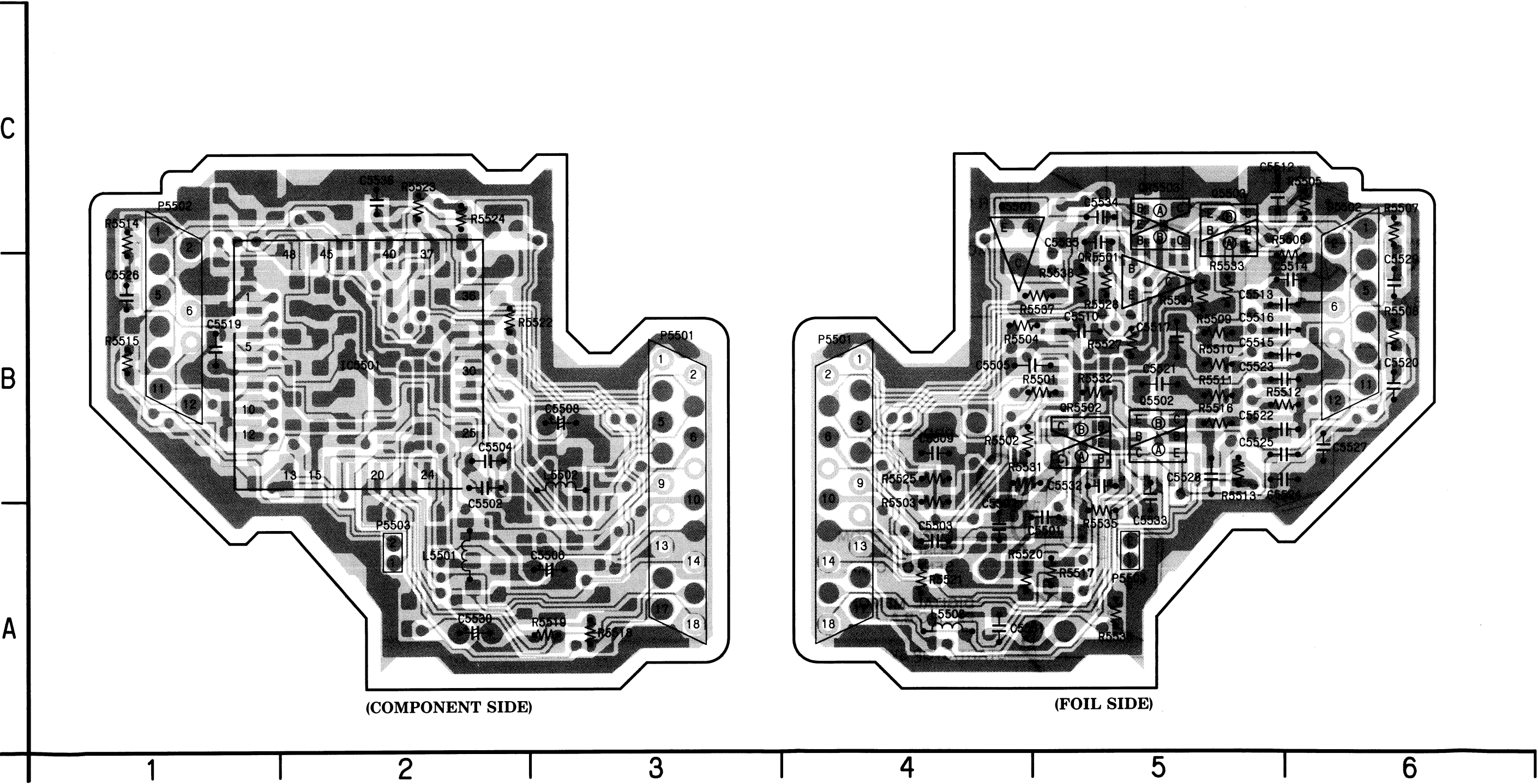
3-35. SLP HEAD AMP SCHEMATIC DIAGRAM



3-36. SLP HEAD AMP C.B.A. (VEP05147A)

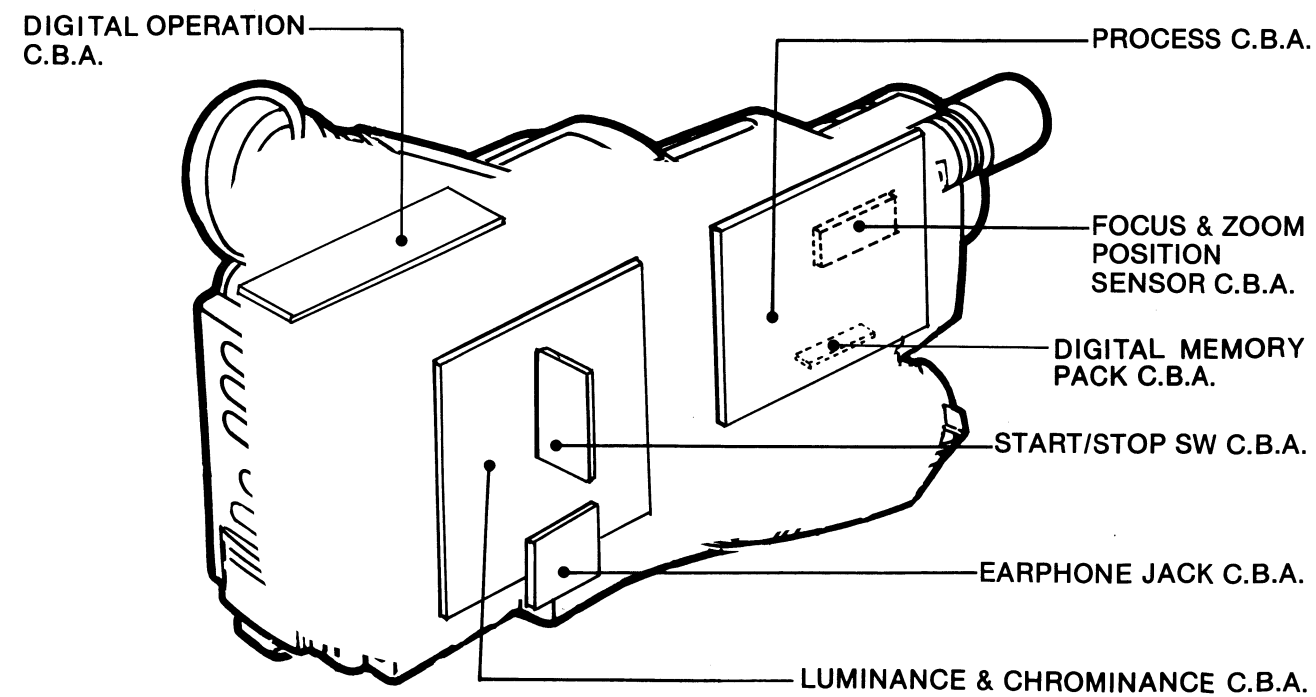
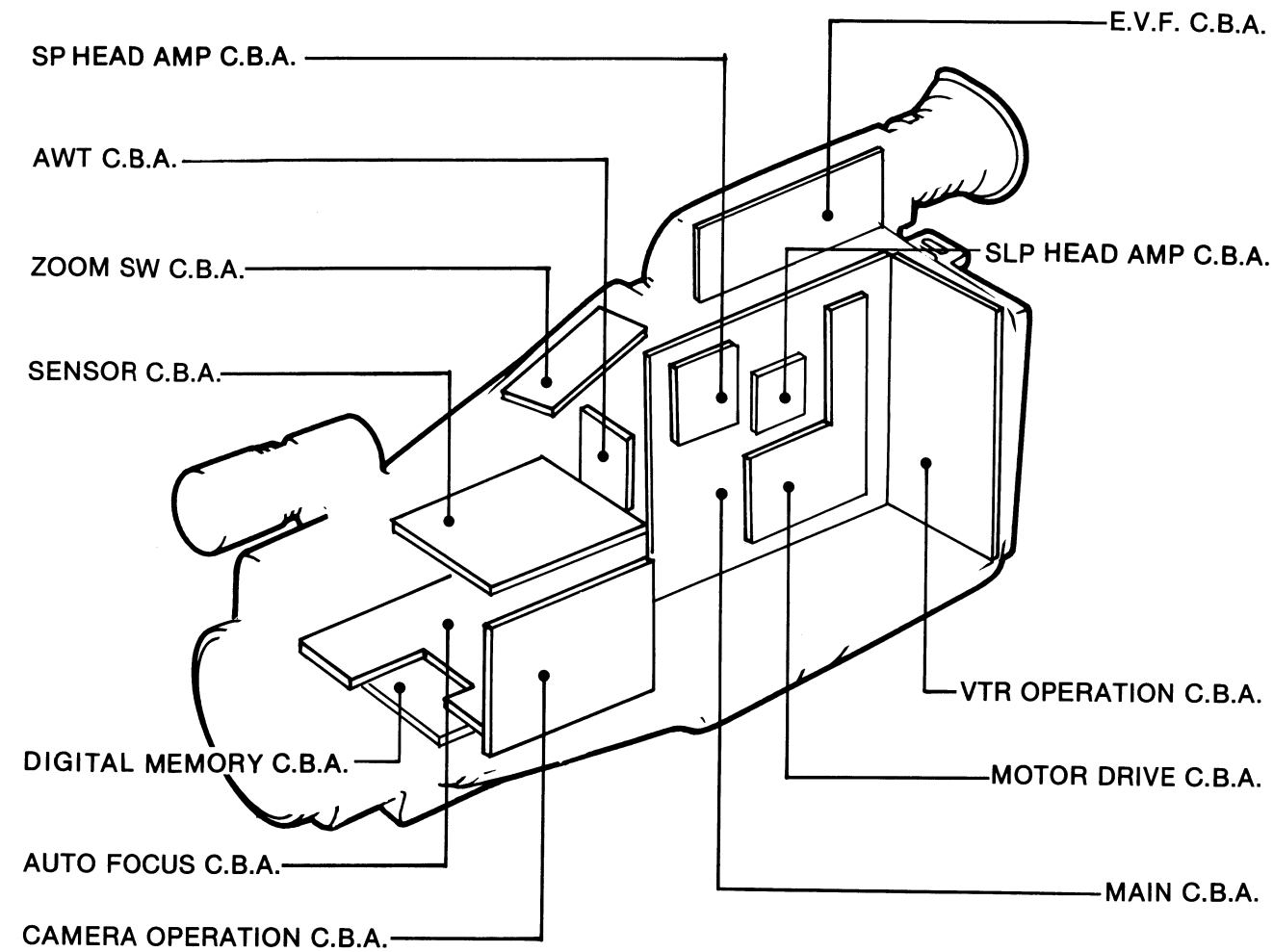
SLP HEAD AMP C.B.A.					
Transistor			Integrated Circuit		
Q5501	C-4	Ⓢ	IC5501	B-2	Ⓢ
Q5502	B-5	Ⓢ	Connector		
Q5503	C-5	Ⓢ			
Transistor & Resistor			P5501	B-3	Ⓢ
QR5501	B-5	Ⓢ	P5501	B-4	Ⓢ
QR5502	B-5	Ⓢ	P5502	C-1	Ⓢ
QR5503	C-5	Ⓢ	P5502	C-6	Ⓢ
			P5503	A-2	Ⓢ
			P5503	A-5	Ⓢ

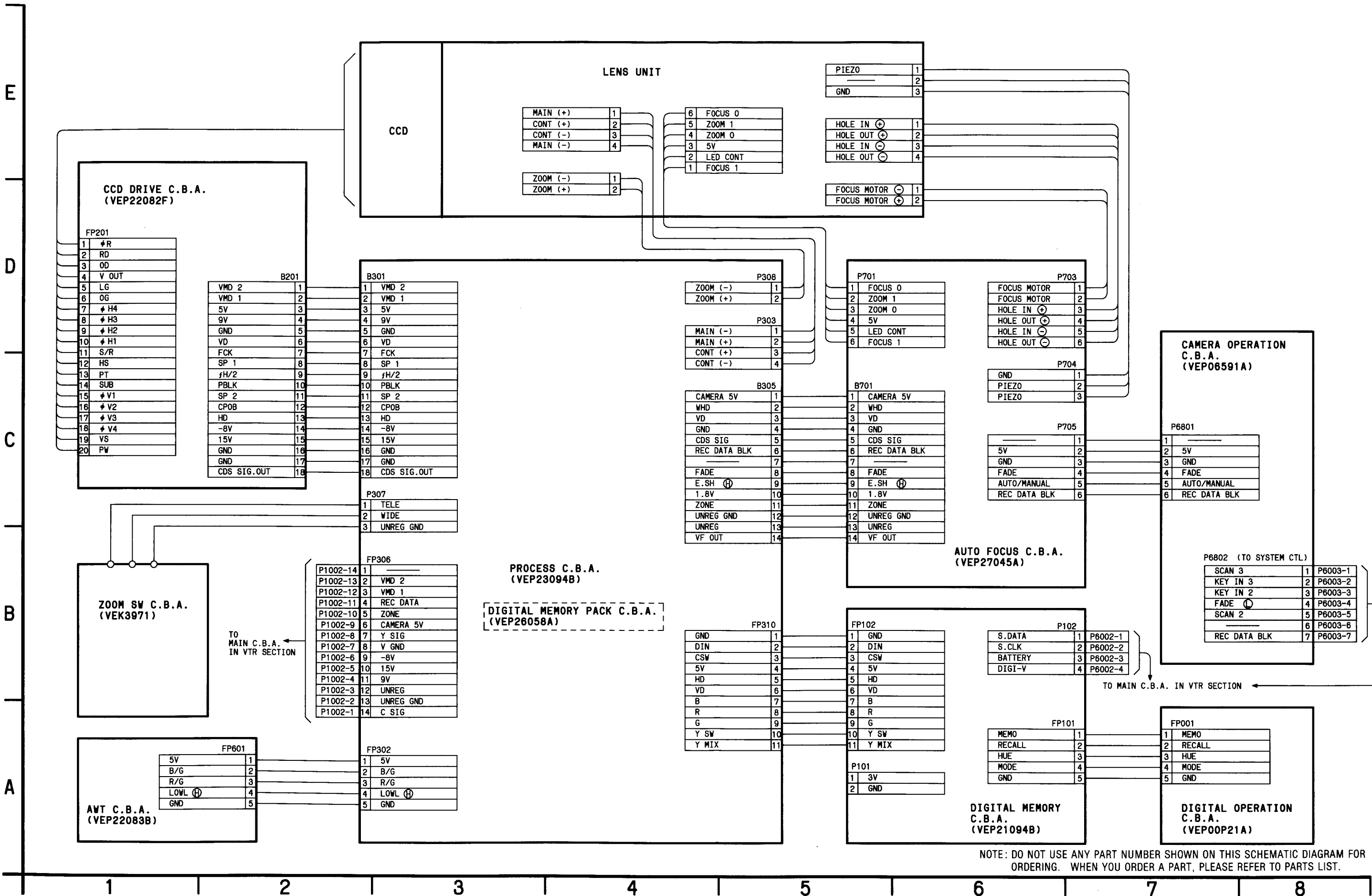
ADDRESS INFORMATION
Ⓢ...COMPONENT SIDE
Ⓢ...FOIL SIDE



3-37. CIRCUIT BOARD LAYOUT

MEMO

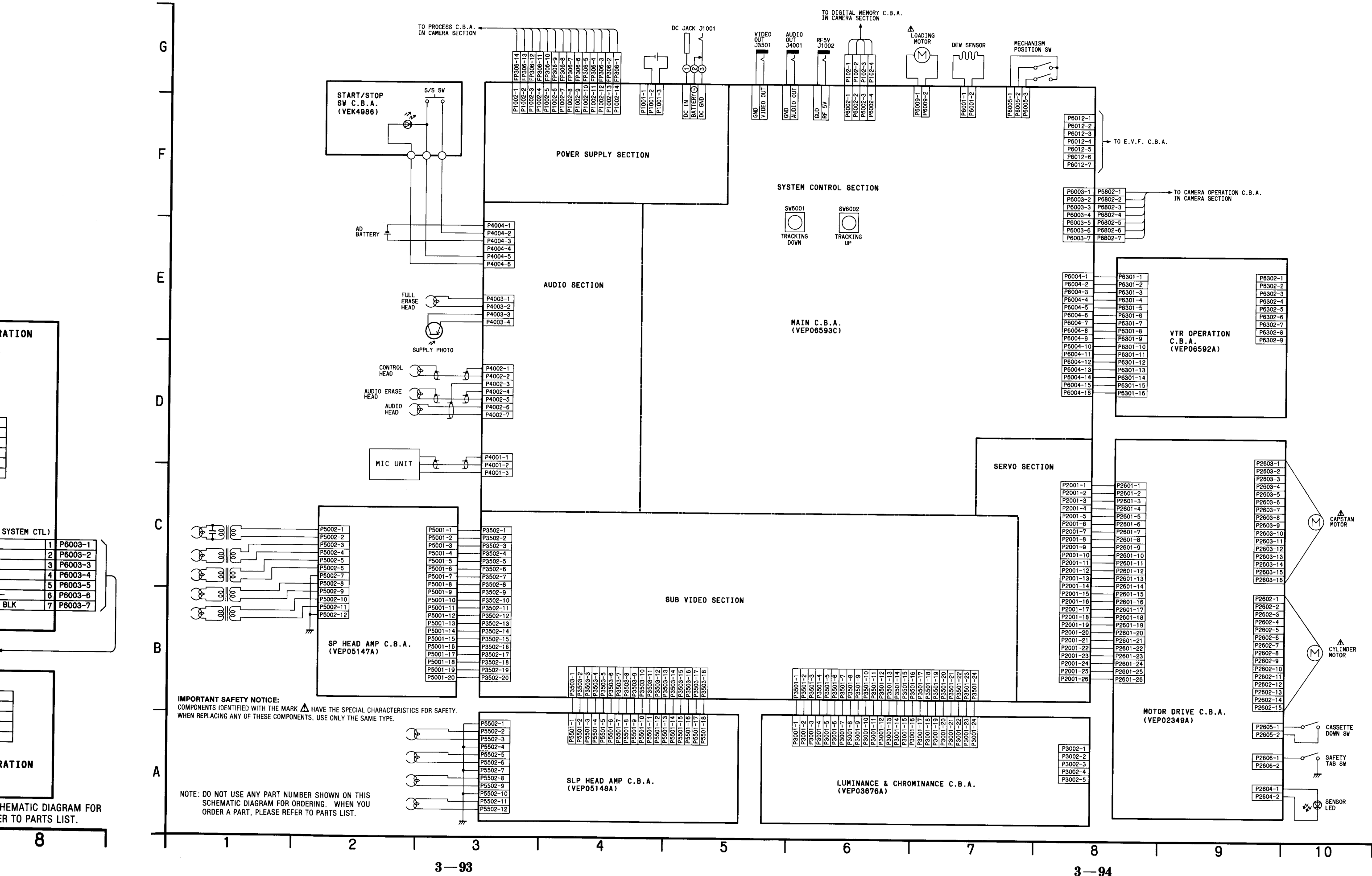




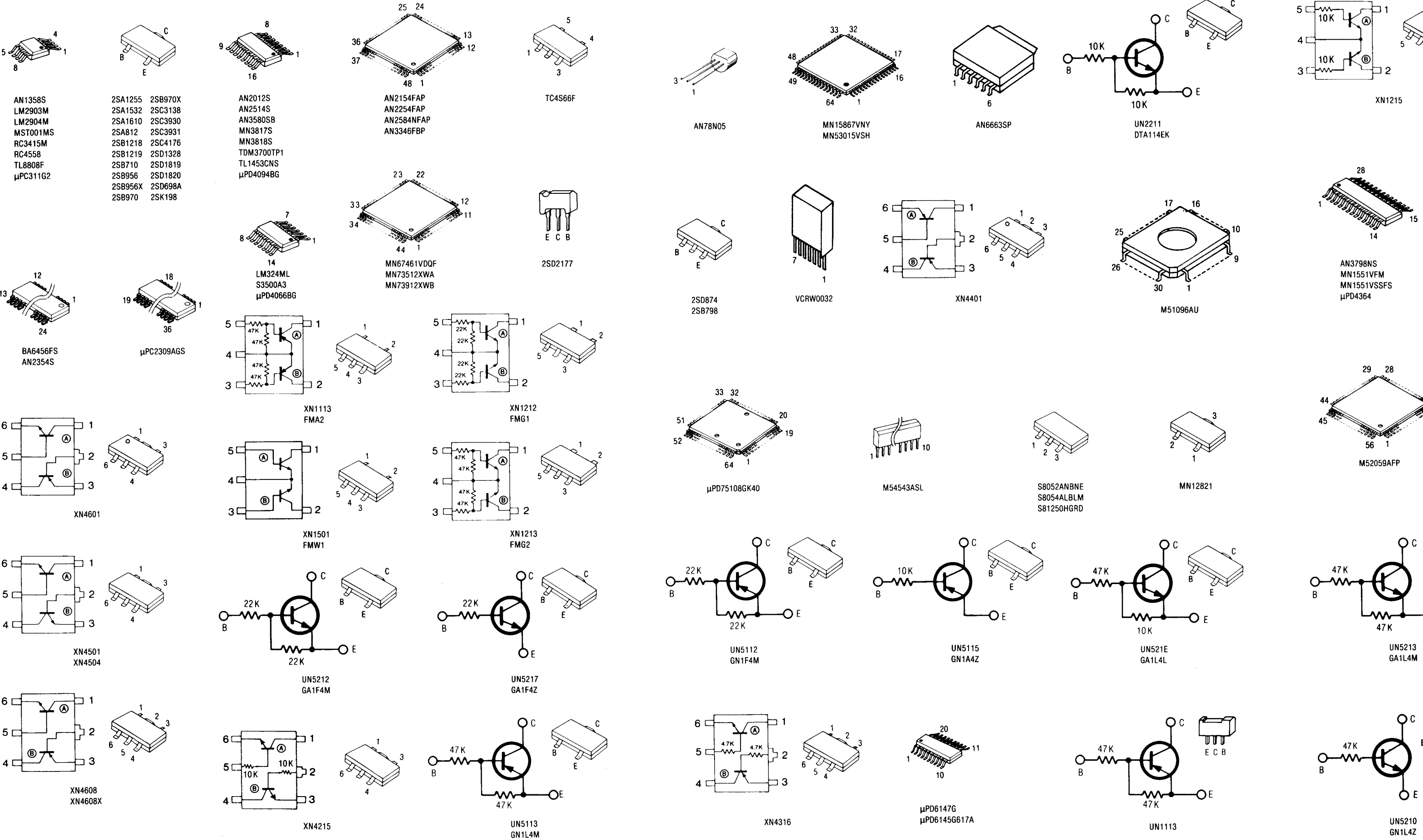
IMPORTANT COMPONENTS WHEN REPLACED

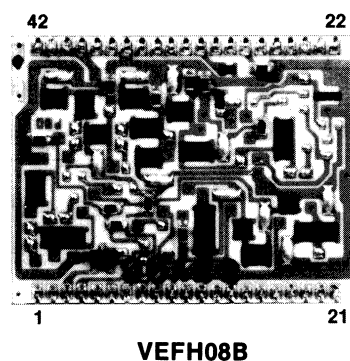
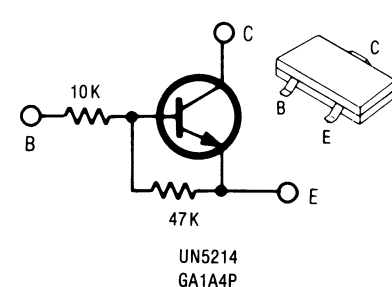
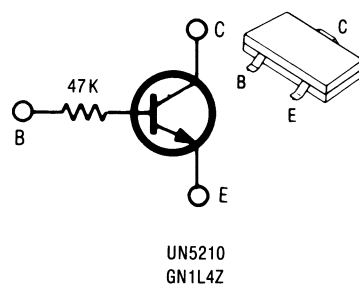
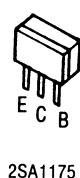
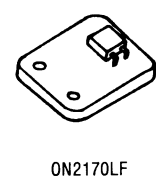
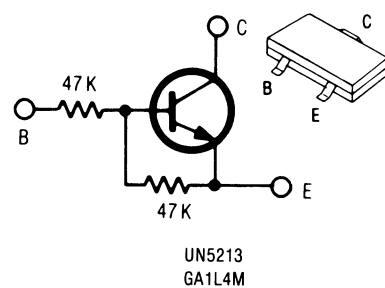
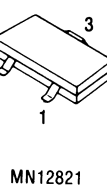
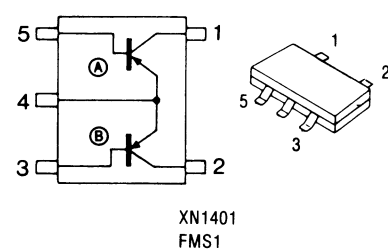
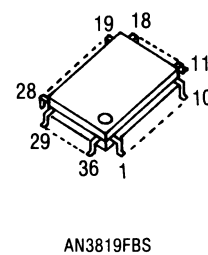
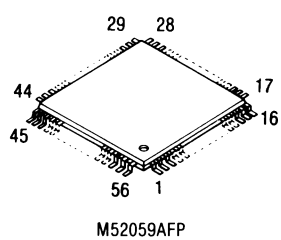
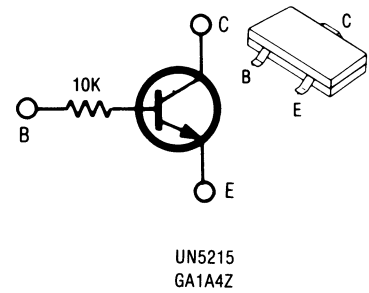
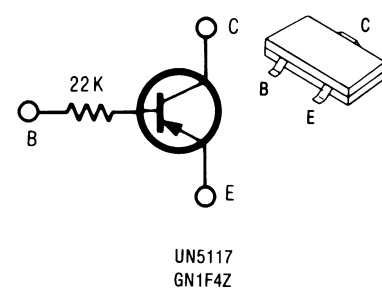
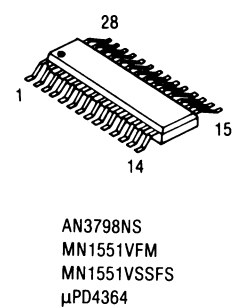
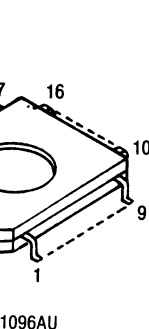
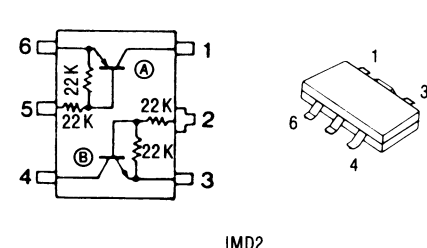
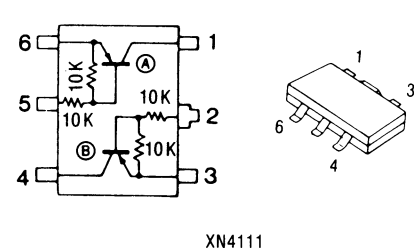
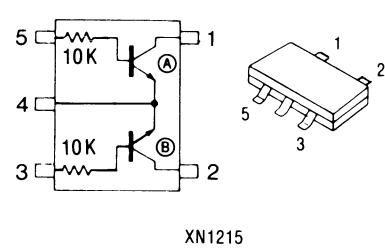
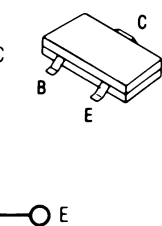
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-39. VTR INTERCONNECTION SCHEMATIC DIAGRAM



3-40. ICs & TRs INFORMATION



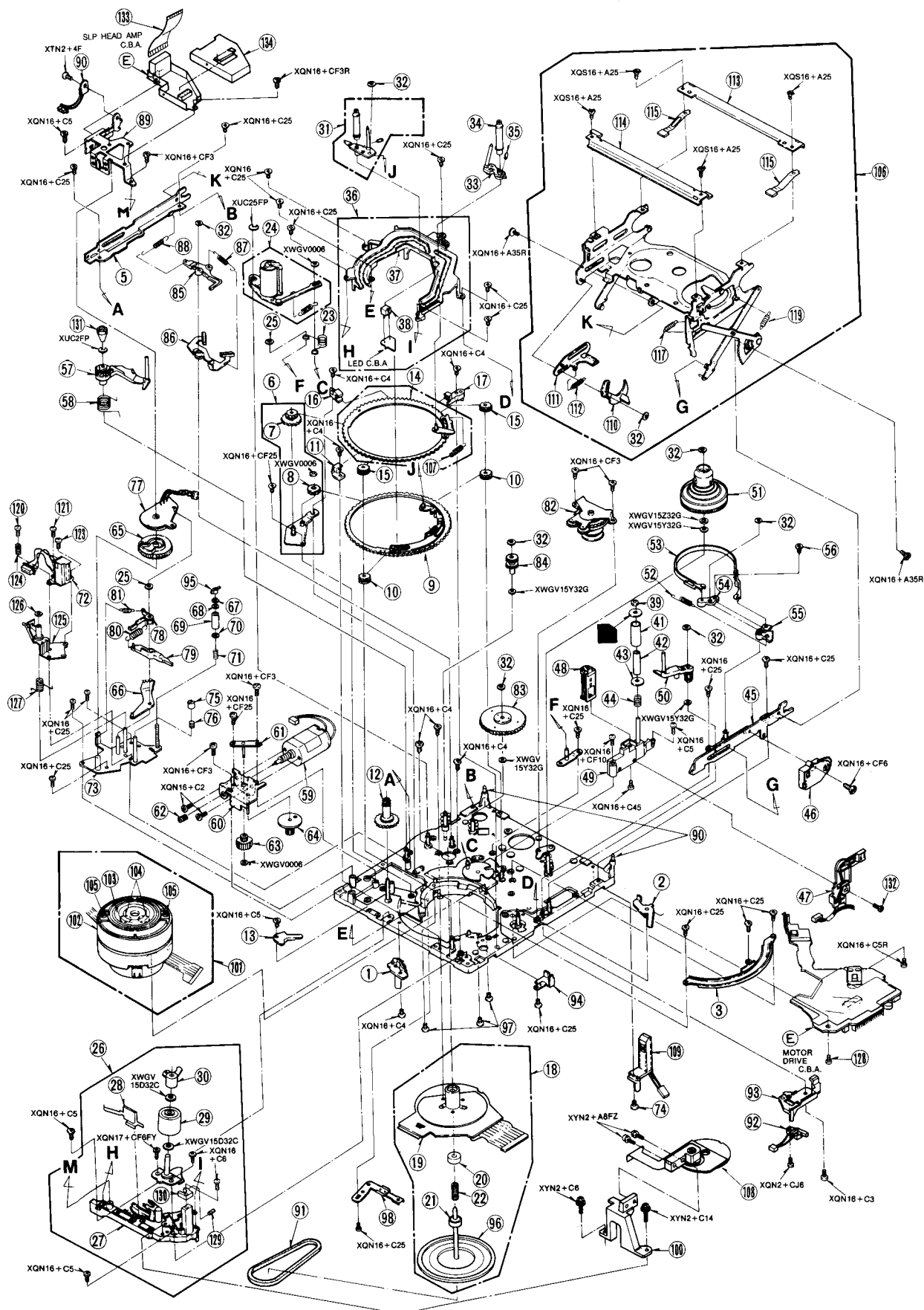


SECTION 4

EXPLODED VIEWS & PARTS LIST

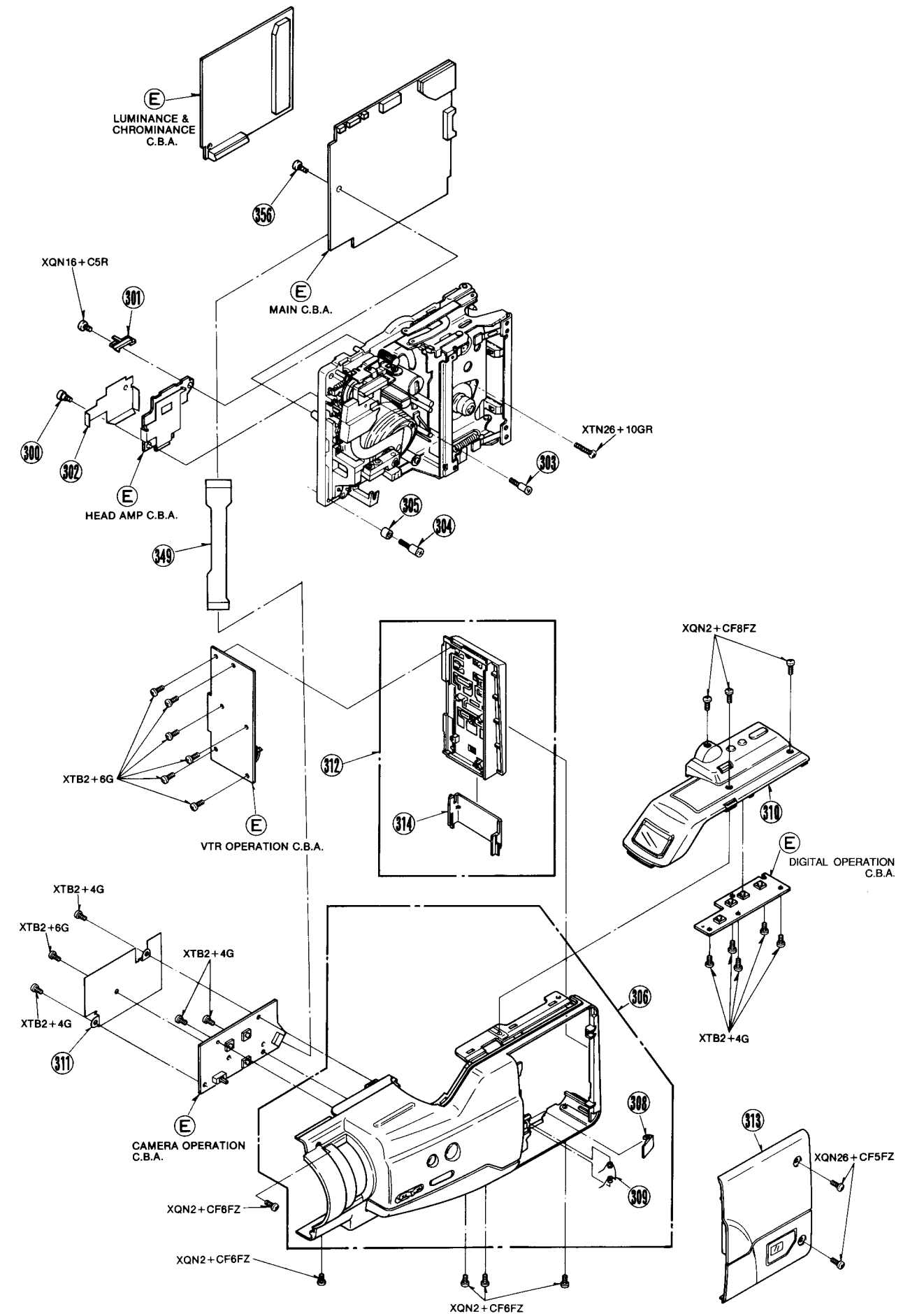
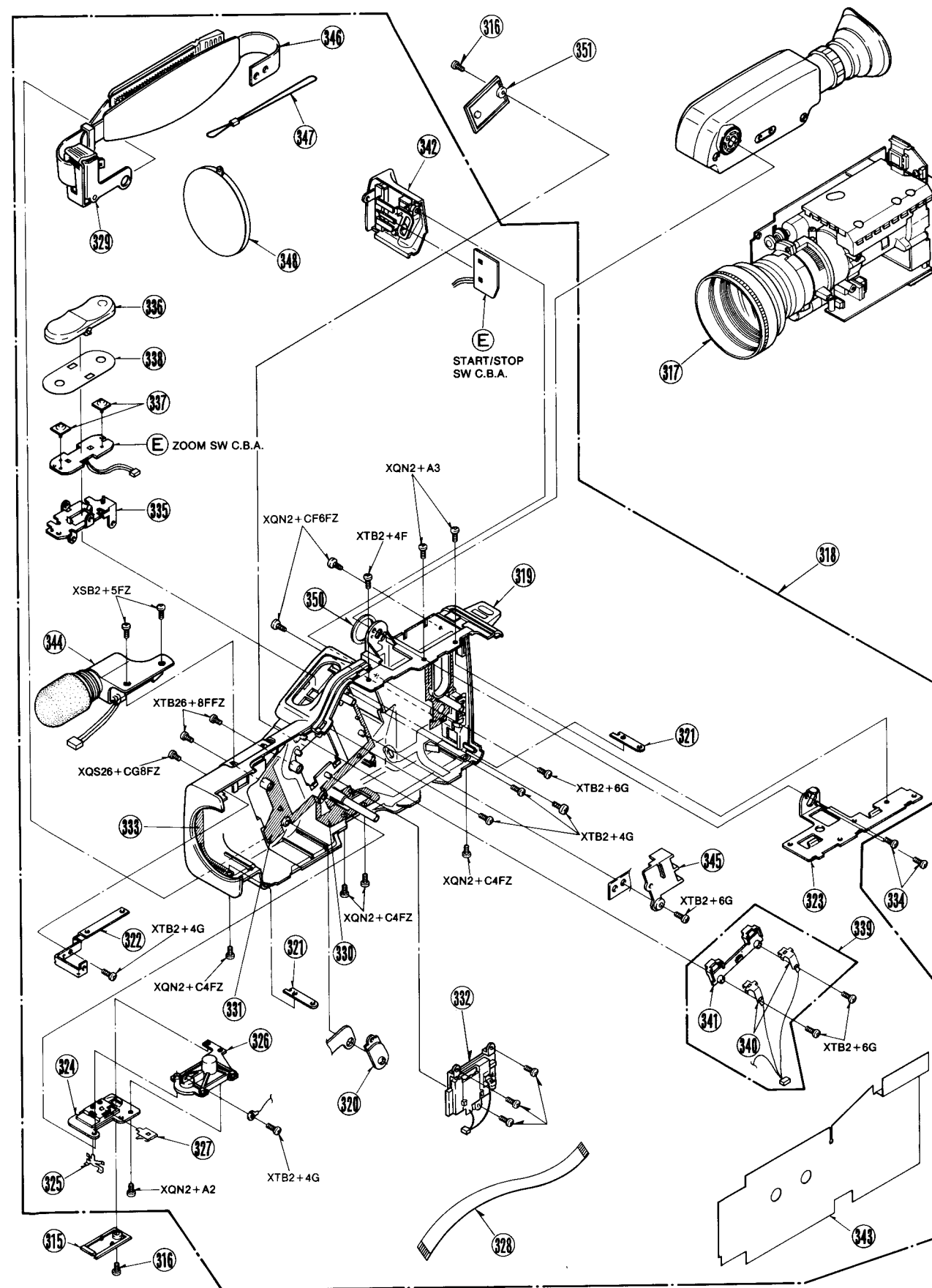
4-1. EXPLODED VIEWS

① VTR MECHANISM SECTION

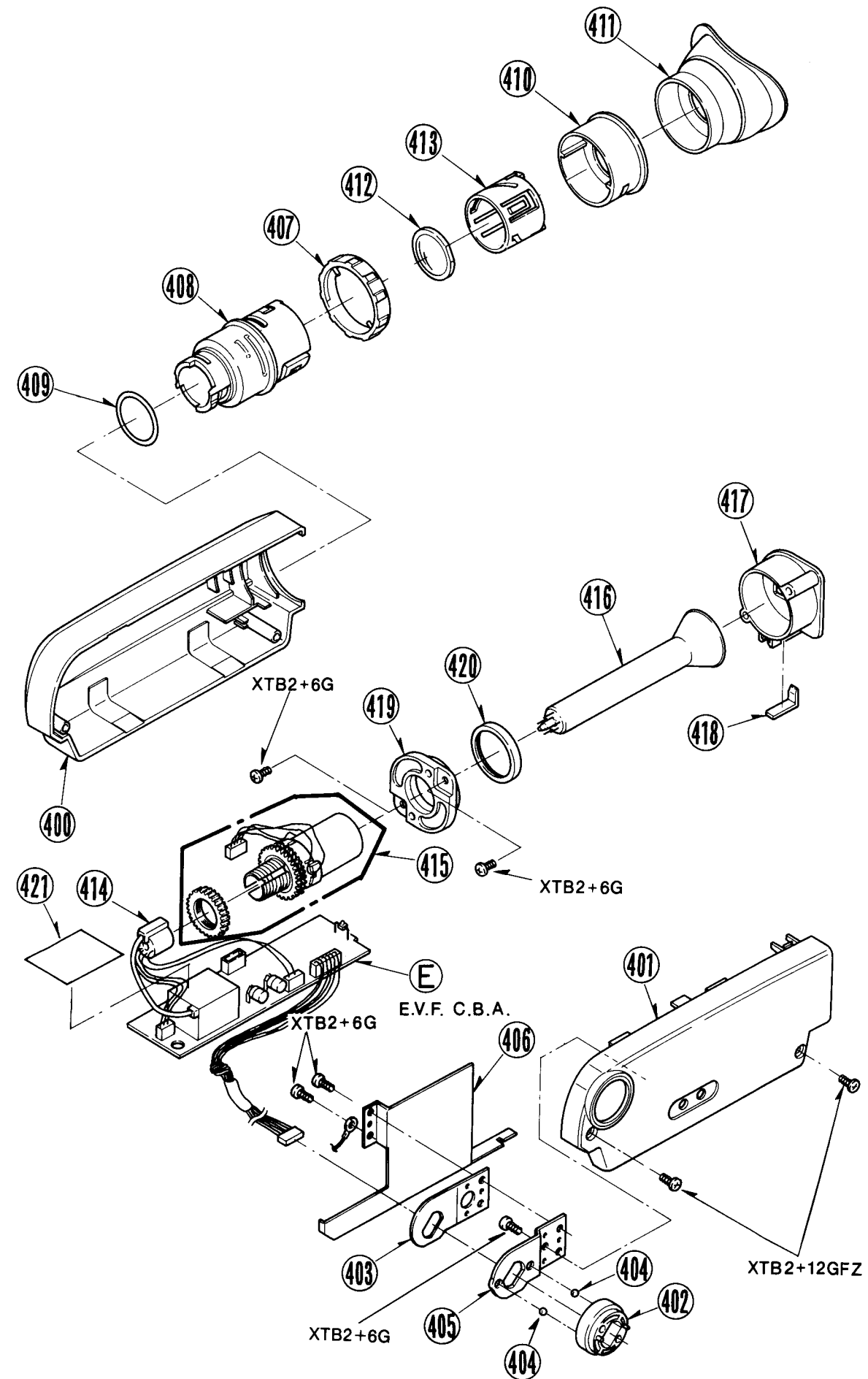


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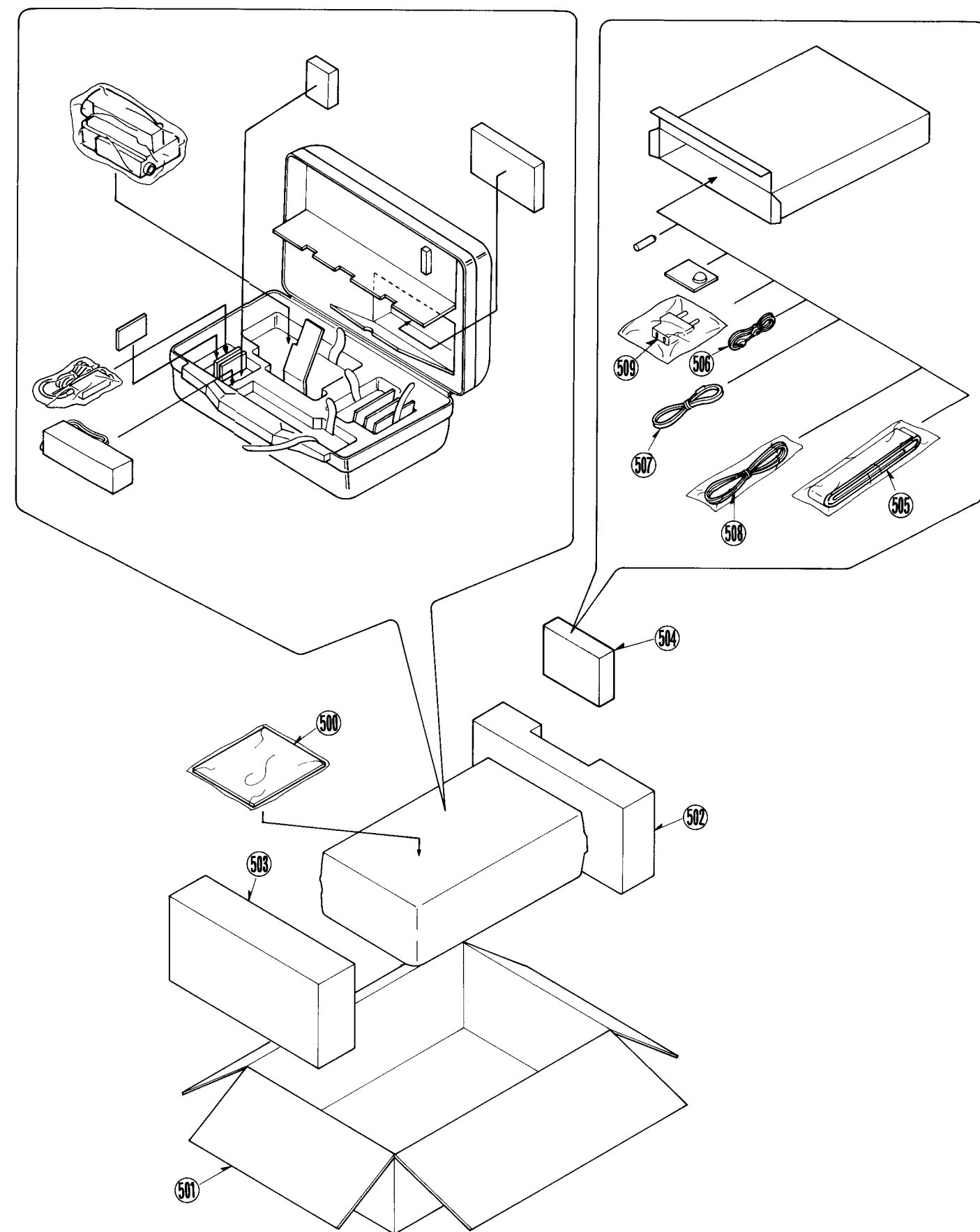
③ CHASSIS & FRAME SECTION



④ E.V.F. SECTION



⑤ PACKING PARTS & ACCESSORIES SECTION



4.2. MECHANICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <I> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VMD1100	LOADING GUIDE (T)	1	
2(1)	VXL1771	EJECT LEVER UNIT	1	
3(1)	VMD1077	LOADING GUIDE (S)	1	
4(1)	VMD1429	CASSETTE SUPPORT PLATE	1	
5(1)	VMA7766	CASSETTE STAND (T)	1	
6(1)	VXA3052	LOADING GEAR BASE UNIT	1	
7(1)	VDG0410	LOADING GEAR (S)	1	
8(1)	VDG0411	LOADING GEAR (T)	1	
9(1)	VXA3037	LOADING RING (T) UNIT	1	
10(1)	VDG0409	RING GUIDE GEAR (T)	2	
11(1)	VMD1263	RING GUIDE (2)	1	
12(1)	VDG0499	TERMINAL GEAR	1	
13(1)	VMD1265	RING LIMITER	1	
14(1)	VXA3038	LOADING RING (S) UNIT	1	
15(1)	VDG0408	RING GUIDE GEAR (S)	2	
16(1)	VMD1262	RING GUIDE (1)	1	
17(1)	VMD1264	RING GUIDE (3)	1	
18(1)	VEM0284	CAPSTAN MOTOR UNIT	1	
19(1)	VEK3345	STATOR UNIT	1	
20(1)	VDB0898	UPPER BEARING	1	
21(1)	VDB0899	UNDER BEARING	1	
22(1)	VMB1173	THRUST SPRING	1	
24(1)	VXL1945	PRESSURE LEVER UNIT	1	
25(1)	VMX1042	CUT WASHER (B)	2	
26(1)	VXA3845	V STOPPER BASE UNIT	1	
27(1)	VMD1446	V STOPPER BASE	1	
28(1)	VMO360	PRESSURE PLATE	1	
29(1)	VDP1282	IMPEDANCE ROLLER	1	
30(1)	VMD1407	SUPPLY UPPER LIMITER	1	
31(1)	VXA3965	SHAFT HOLDER (T) UNIT	1	
32(1)	VXL1061	CUT WASHER (A)	8	
33(1)	VXA3064	SHAFT HOLDER S1 UNIT	1	
34(1)	VXJ0062	S1 ROLLER POST UNIT	1	
35(1)	VHDO392	SCREW	1	
36(1)	VXA3846	LOADING GUIDE UNIT	1	
37(1)	VMD1272	LOADING GUIDE	1	
38(1)	TIN107A	SENSOR LED	1	
39(1)	VHN0047	NUT	1	
40(1)	VMX1734	S1 WASHER	1	
41(1)	VDP1292	S1 ROLLER	1	
42(1)	VMX1628	S1 COLLAR	1	
43(1)	VMX1690	S1 LOWER LIMITER	1	
44(1)	VMB2038	S1 SPRING	1	
45(1)	VXA3844	CASSETTE STAND (S) 1 UNIT	1	
46(1)	VXP0891	DAMPER UNIT	1	
47(1)	VEK4562	TAPE END DETECTION UNIT	1	
48(1)	VBS0045	FE HEAD	1	
49(1)	VXA3851	ERASE HEAD BASE (1) UNIT	1	
50(1)	VXL1944	TENSION ARM UNIT	1	
51(1)	VXR0175	SUPPLY REEL TABLE	1	
52(1)	VMB1868	TENSION SPRING	1	
53(1)	VX20249	TENSION BAND UNIT	1	
54(1)	VML2281	BAND ARM	1	
55(1)	VMD1082	BAND ADJUSTMENT PIECE	1	
56(1)	VHDO390	BAND ARM SCREW	1	
57(1)	VXL1789	TAPE GUIDE ARM F UNIT	1	
58(1)	VMB1707	TAPE GUIDE ARM SPRING	1	
59(1)	VEM0341	LOADING MOTOR (1) UNIT	1	
60(1)	VXA3374	LOADING MOTOR BRACKET UNIT	1	
61(1)	VXA3375	MOTOR GEAR BASE UNIT	1	
62(1)	VHDO442	WORM ADJUSTMENT SCREW	1	
63(1)	VDG0495	MOTOR GEAR A	1	
64(1)	VDG0494	MOTOR GEAR B	1	
65(1)	VDK0017	CONTROL CAM	1	
66(1)	VXP0904	SECTOR GEAR UNIT	1	
67(1)	VHN0065	T3 POST NUT	1	
68(1)	VMD1472	T3 POST FLANGE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
69(1)	VMX1251A	P1 SPACER	1	
70(1)	VMX1471	T3 POST BOTTOM	1	
71(1)	VMB1716	T3 POST SPRING	1	
72(1)	VED0119	A/C HEAD UNIT	1	
73(1)	VXA3848	A/C HEAD PLATE UNIT	1	
74(1)	VHDO389	SCREW	1	
75(1)	VHN0133	P2 POST ADJUST NUT	1	
76(1)	VMB1995	P2 POST ADJUST SPRING	1	
77(1)	VES0416	MODE SELECT SWITCH	1	
78(1)	VXL1675	TAPE GUIDE LEVER (2) UNIT	1	
79(1)	VML2191	TAPE GUIDE LEVER (1)	1	
80(1)	VMB1971	TAPE GUIDE LEVER SPRING	1	
81(1)	VMB1872	TAPE GUIDE LEVER SPRING (2)	1	
82(1)	VXP0922	IDLER UNIT	1	
83(1)	VXP0890	CLUTCH GEAR (T) UNIT	1	
84(1)	VDG0407	TAKEUP REEL GEAR	1	
85(1)	VML2026	SOFT BRAKE ARM	1	
86(1)	VXL1670	SOFT BRAKE UNIT	1	
87(1)	VMB1710	SOFT BRAKE SPRING (1)	1	
88(1)	VMB1871	SOFT BRAKE SPRING (2)	1	
89(1)	VMA7764	H.A PLATE	1	
90(1)	VEK4635	HUMIDITY (DEW) RESISTOR	1	
91(1)	VDO170	DRIVE BELT	1	
92(1)	VES0542	CASSETTE DOWN SW	1	
93(1)	VMD1266	CASSETTE DOWN SW HOLDER	1	
94(1)	VMA7112	MR SHIELD COVER	1	
95(1)	VMD1578	T3 POST CAP (3)	1	
96(1)	VXP0873	ROTOR UNIT	1	
97(1)	VHDO389	CYLINDER SCREW	3	
98(1)	VXS0077	EARTH BRUSH UNIT	1	
99(1)	VMS3533	CASSETTE GUIDE PIN	2	
100(1)	VMA7801	STATOR ARM (2)	1	
101(1)	VEG0679	CYLINDER UNIT	1 <I>	
102(1)	VEH0411	UPPER CYLINDER UNIT	1 <I>	
103(1)	VETO129	UPPER RT (R) UNIT	1	
104(1)	VHDO288	UPPER CYLINDER SCREW	2	
105(1)	VHDO443	UPPER RT (R) SCREW	2	
106(1)	VXA3852	CASSETTE UP UNIT	1	
107(1)	VMB1714	LOADING RING (S) SPRING	1	
108(1)	VXL1848	UPPER RT (S) ARM UNIT	1	
109(1)	VES0544	SAFETY TAB SW	1	
110(1)	VML2289	OPEN LEVER	1	
111(1)	VXL1676	OPEN SLIDE LEVER (1) UNIT	1	
112(1)	VMB1721	OPEN SLIDE LEVER SPRING	1	
113(1)	VMA7772	HOLDER STAY (F)	1	
114(1)	VMA7771	HOLDER STAY (R)	1	
115(1)	VMB2039	CATCH PLATE	2	
117(1)	VMB1860	LOCK SPRING	1	
119(1)	VMB1824	SPRING (S)	1	
120(1)	VHDO525	A/C SCREW	1	
121(1)	VHDO526	ADJUST SCREW	1	
123(1)	VHDO536	AZIMUTH SCREW	1	
124(1)	VMB2036	A/C HEAD SPRING	1	
125(1)	VXL1943	A/C HEAD ARM (1) UNIT	1	
126(1)	VHN0047	NUT	1	
127(1)	VMB2035	A/C SPRING	1	
128(1)	VHDO439	SCREW (A)	1	
129(1)	VHDO537	SCREW	1	
130(1)	VMD1447	V STOPPER	1	
131(1)	VHN0124	ADJUST NUT	1	
132(1)	VHDO568	TAPE END DETECTION UNIT	1	
		FIXING SCREW		
133(1)	VWJ0396	EP FLEXIBLE CARD	1	
200(2)	VDO170	IR CUT FILTER	1	
201(2)	VMP2454	AWT FIXING ANGLE	1	
202(2)	VMP1810	AWT HOOK SPRING	1	
203(2)	VWJ0397	AWT FLEXIBLE CORD	1	FP601 - FP302
204(2)	VQJ1660	IR SPACER	1	
206(2)	VHDO398	SENSOR C.B.A. SCREW	2	
207(2)	VMP2064	CAMERA FIXING ANGLE	1	
208(2)	VSC2575	SENSOR FRAME SHIELD PLATE	1	
209(2)	VWJ0305	PROCESS FLEXIBLE CORD	1	FP306 - F1002
210(2)	VJF0654	SENSOR FRAME	1	
211(2)	VMD1256	SENSOR C.B.A. FRAME	1	
212(2)	VXW0056	LENS UNIT	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
213(2)	VDW0104	FOCUS RING	1		403(4)	VMO0596	ROTARY LOCK SPRING	1	
214(2)	VEM0318	FOCUS MOTOR UNIT	1		404(4)	VMP2327	STEEL BALL	2	
215(2)	VEM0319	ZOOM MOTOR UNIT	1		405(4)	VMP2668	STEEL BALL FIXING ANGLE	1	
216(2)	VGFO247	FOCUS FASTENER	1		406(4)	VMZ1535	SHIELD PLATE	1	
217(2)	VJFO661	POSITION SENSOR HOLDER	1		407(4)	VJFO753	EYESIGHT CONNECTION RING	1	
218(2)	VXL1635	IRIS UNIT	1		408(4)	VKM1893	EYESIGHT CONNECTION CASE	1	
219(2)	VXQ0057	LENS (1) UNIT	1		409(4)	VMX1322	O RING	1	
220(2)	VXP1118	LENS (2) UNIT	1		410(4)	VJFO743	EYE CAP HOLDER	1	
221(2)	VDL0143	CRYSTAL FILTER	1		411(4)	VMG0408	EYE CAP	1	
222(2)	VMX1276	CCD CUSHION	1		412(4)	VDL0145	E.V.F. LENS	1	
223(2)	VXQ0017	ACTUATOR	1		413(4)	VJFO827	E.V.F. LENS HOLDER	1	
224(2)	VEK4613	CCD UNIT	1		414(4)	VEE5792	CRT SOCKET UNIT	1	
225(2)	MN3735FC	CCD	1		415(4)	E1Y07V552K	DY	1	
226(2)	VMA7183	CCD PLATE	1		416(4)	MO1JVW47WB	CRT	1	
227(2)	VMJ0340	CCD FLEXIBLE CORD	1		417(4)	VGFO336	CRT MASKING	1	
228(2)	VSC2976	INSULATING SHIELD BARRIER	1		418(4)	VGL0405	LED PANEL LIGHT	1	
229(2)	VMJ0398	DIGITAL MEMORY FLEXIBLE CARD	1		419(4)	VJFO742	CRT HOLDER	1	
230(2)	VMZ1474	D SHIELD BARRIER	1		420(4)	VMX1797	CRT RUBBER	1	
231(2)	VSC2954	D SHIELD ANGLE	1		421(4)	VMZ1611	FBT BARRIER	1	
300(3)	VHDO439	SCREW (A)	1						
301(3)	VMD1268	SPACER	1		500(5)	VQT3766	OPERATING INSTRUCTIONS (ENGLISH)	1	(1)
302(3)	VSC2945	SP HEAD AMP UPPER SHIELD	1						
303(3)	VHDO451	SCREW	1		501(5)	VPG5528	PACKING	1	
304(3)	VHDO395	SCREW	1		502(5)	VPN1994	CUSHION (R)	1	
305(3)	VMX1332	SCREW SPACER	1		503(5)	VPN1995	CUSHION (L)	1	
306(3)	VYK3300	SIDE CASE (R) (1) UNIT	1		504(5)	VPK1282	ACCESSORIES BOX	1	
308(3)	VML2422	SAFETY LEVER	1		505(5)	VFCO729	SHOULDER STRAP	1	
309(3)	VMB1986	SAFETY SPRING	1		506(5)	VJAO401	DC OUTPUT CORD	1	
310(3)	VYK3295	TOP CASE UNIT	1		507(5)	VFA0039	AV OUTPUT CORD	1	
311(3)	VMZ1473	CAMERA OPERATION BARRIER	1		508(5)	VJAO376	DIN RF CABLE	1	
312(3)	VYK3291	VTR OPERATION CASE (1) UNIT	1		509(5)	VJP1005	AC PLUG ADAPTOR	1	
313(3)	VGPO2673	CASSETTE COVER	1						
314(3)	VKF1556	CURSOR	1						
315(3)	VKF1142	BATTERY LID	1						
316(3)	VHDO599	SCREW	2						
317(3)	VDW0103	LENS FOOD	1						
318(3)	VYK3296	SIDE CASE (L) UNIT	1						
319(3)	VYK3297	SIDE CASE (L) (1) UNIT	1						
320(3)	VGQ1915	BATTERY LOCK HOLDER	1						
321(3)	VMP1789	FIXING ANGLE (B)	2						
322(3)	VMP2421	MIC FIXING ANGLE	1				JIG & TOOLS		
323(3)	VMP2422	EVF FIXING ANGLE	1			VMS0002H6C	VHS-C ALIGNMENT TAPE	1	
324(3)	VKM1549	BATTERY BRACKET	1			VFKS0047	Y/C SEPARATOR	1	
325(3)	VMO3399	BATTERY TERMINAL (B)	1			VFK0382	CAMERA HOLDER	1	
326(3)	VMD1344	TRIPOD FIXING BRACKET	1			VFK0431	CAMERA HOLDER ARM	1	
327(3)	VMO3326	BATTERY TERMINAL (A)	1			VFK0432	HOLDER SPACER	2	
328(3)	VMJ0395	FLEXIBLE CARD	1			XSN26+18	SCREW	2	
329(3)	VXA3870	GRIP BELT ANGLE UNIT	1			VFK0546	HUNTING & GRAY/WHITE CHART	1	
330(3)	VGQ1951	ESD BARRIER (4)	1			VFK0580	BALL CHART/J-CHART	1	
331(3)	VGQ1954	ESD BARRIER (7)	1			VFK0374	COLOUR TEMP. CONV. FILTER	1	(C12)
332(3)	VYK2482	DIGITAL MEMORY BATTERY	1			VFK0375	COLOUR TEMP. CONV. FILTER	1	(C 2)
		BRACKET UNIT				VFK0547	COLOUR TEMP. CONV. FILTER	1	(C 8)
333(3)	VGQ1957	ESD BARRIER (10)	1			VKM1049	DIFFUSION PLATE	1	
334(3)	VHDO584	SCREW	2			VFKS0051	EXTENSION CABLE (3P)	1	
335(3)	VGQ1930	ZOOM BUTTON HOLDER	1			VFKS0052	EXTENSION CABLE (5P)	1	
336(3)	VGU4389	ZOOM BUTTON	1			VFK0430	EXTENSION CABLE (14P)	1	
337(3)	VMG0358	ZOOM RUBBER SWITCH	2			VFK0503	EXTENSION CABLE (5P)	1	
338(3)	VGQ1750	ZOOM BUTTON SHEET	1			VFK0380	EXTENSION CABLE (18P)	1	
339(3)	VYK2318	BATTERY TERMINAL UNIT	1			VFK0497	EXTENSION CABLE (6P)	1	
340(3)	VMO403	BATTERY TERMINAL PLATE	2			VFK0607	EXTENSION CABLE (26P)	1	
341(3)	VGQ1608	BATTERY TERMINAL HOLDER	1			VFKS0067	EXTENSION CABLE (20P)	1	
342(3)	VYK2810	GRIP BELT HOOK COVER UNIT	1			VFKS0060	EXTENSION CABLE (2P)	1	
343(3)	VMZ1472	SHIELD BARRIER	1			VFK0524	EXTENSION CABLE (3P)	1	
344(3)	VEK5125	MIC UNIT	1			VFKS0074	CONNECTOR	1	
345(3)	VGQ1929	GRIP BELT SUPPORT ANGLE	1			VFK0132	BACK TENSION METER	1	
346(3)	VYCO358	GRIP BELT UNIT	1			VFK0157	FINE ADJUSTMENT SCREWDRIVER	1	
347(3)	VGQ1349	HOOD STRAP	1			VFK0343	CHECK LIGHT	1	
348(3)	VKF1346	HOOD CAP	1			VFK0326	HEX WRENCH SET	1	
349(3)	VMJ0399	FLEXIBLE CARD	1			VFK27	HEAD CLEANING STICK	1	
350(3)	VMX1694	E.V.F. SPACER	1			MOR265	MORLYTONE GREASE	1	
351(3)	VKF1239	DIGITAL MEMORY BATTERY LID	1						
356(3)	VHDO440	MAIN SCREW	1						
400(4)	VKM2063	E.V.F. SIDE CASE (L)	1						
401(4)	VKM1892	E.V.F. SIDE CASE (R)	1						
402(4)	VMO3376	ROTARY PIECE	1						

4.3. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
 2.IMPORTANT SAFETY NOTICE
 Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.
 3.Unless otherwise specified,
 All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf), P=uuf.
 4.The P.C.Board units marked with (!) show below the main assembled parts.
 5.Printed circuit board assembly with mark(NLA) is no longer available after discontinuation of the product.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP22083B	AWT C.B.A.	1	(NLA)
	VEP22082F	CCD DRIVE C.B.A.	1	(NLA)
	VEP23094B	PROCESS C.B.A.	1	(NLA) INCLUDING THE DIGITAL MEMORY PACK C.B.A. (VEP26058A)
	VEP26058A	DIGITAL MEMORY PACK C.B.A.	1	(NLA) PARTS LIST IS INCLUDED IN PROCESS C.B.A. (VEP23094B)
	VEP27045A	AUTO FOCUS C.B.A.	1	(NLA)
	VEP21094B	DIGITAL MEMORY C.B.A.	1	(NLA)
	VEP06591A	CAMERA OPERATION C.B.A.	1	(NLA)
	VEP30038A	AF/ZOOM DETECT C.B.A.	1	(NLA)
	VEPOOP21A	SUB OPERATION C.B.A.	1	(NLA)
	VEP28022A	E.V.F. C.B.A.	1	(NLA)
	VEP06593C	MAIN C.B.A.	1	(NLA)
	VEP03676A	LUMINANCE/CHROMINANCE C.B.A.	1	(NLA)
	VEP02349A	DRIVE C.B.A.	1	(NLA)
	VEP05147A	SP HEAD AMP C.B.A.	1	(NLA)
	VEP05148A	SLP HEAD AMP C.B.A.	1	(NLA)
	VEP06592A	VTR OPERATION C.B.A.	1	(NLA)
	VEK4986	START/STOP SW C.B.A.	1	(NLA)
	VEK3971	ZOOM SW C.B.A.	1	(NLA)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP22083B	AWT C.B.A.		(NLA)
		CAPACITORS		
C601-03	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	3	
FP601	VJS2110	CONNECTOR (FEMALE)	1	
IC601	M51096AU	IC	1	
		RESISTORS		
R601	ERJ6QMYF123	M.RESISTOR CH 1/10W 12K	1	
R602	ERJ6QMYF822	M.RESISTOR CH 1/10W 8.2K	1	
R603	ERJ6QMYF124	M.RESISTOR CH 1/10W 120K	1	
R604	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R605	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
	VEP22082F	CCD DRIVE C.B.A.		(NLA)
B201	VJP1948	CONNECTOR (MALE)	1	
		CAPACITORS		
C201	ECSF1AE106	T.CAPACITOR 10V 10U	1	
C202,03	ECUM1H150JCV	C.CAPACITOR CH 50V 15P	2	
C204	ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C206	ECRJA010A12	TRIMER	1	
C207	ECSF1AE106	T.CAPACITOR 10V 10U	1	
C208	ECEVOJA220	E.CAPACITOR 6.3V 22U	1	
C209	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C210	ECEV1HA010	E.CAPACITOR 50V 1U	1	
C211	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C212	ECEA1EKS100	E.CAPACITOR 25V 10U	1	
C213	ECUM1E4732FN	C.CAPACITOR CH 25V 0.047U	1	
C214	ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C215,16	ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C218,19	ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C220	ECSF1CE106	T.CAPACITOR 16V 10U	1	
C221,22	ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C223	ECUM1H6822FV	C.CAPACITOR CH 50V 6800P	1	
C225	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C226	ECEA1EKS100	E.CAPACITOR 25V 10U	1	
C229	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C236	ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C237	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C239	ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C242,43	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	2	
C244	ECUM1E4732FN	C.CAPACITOR CH 25V 0.047U	1	
C245	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	
C246	ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C247	ECEV1CA100	E.CAPACITOR 16V 10U	1	
C248,49	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	2	
C252,53	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	2	
C255	ECEV1CA100	E.CAPACITOR 16V 10U	1	
C262,63	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	2	
C280	ECSF1AE106	T.CAPACITOR 10V 10U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C363,64	ECUMIE104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C365	ECSFOJE336	T.CAPACITOR 6.3V 33U	1	
C366	ECUMIH1032FV	C.CAPACITOR CH 50V 0.01U	1	
C368	ECUMIH271JCV	C.CAPACITOR CH 50V 270P	1	
C369	ECSTIAC106Z	T.CAPACITOR 10V 10U	1	
C371	ECSTICV105Z	T.CAPACITOR 16V 1U	1	
C372	ECEVOJA470	E.CAPACITOR 6.3V 47U	1	
C373	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C374-76	ECUMIE104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C377	ECUMIH1032FV	C.CAPACITOR CH 50V 0.01U	1	
C378	ECUMIH220JCV	C.CAPACITOR CH 50V 22P	1	
C379	ECUMIH150JCV	C.CAPACITOR CH 50V 15P	1	
C382	ECUMIH220JCV	C.CAPACITOR CH 50V 22P	1	
C384	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	1	
C385	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C386	ECEVICA100	E.CAPACITOR 16V 10U	1	
C387-89	ECUMIH560JCV	C.CAPACITOR CH 50V 56P	3	
C393	ECUMIH820JCV	C.CAPACITOR CH 50V 82P	1	
C395,96	ECUMIC105ZFN	C.CAPACITOR CH 16V 1U	2	
C398-00	ECUMIH1032FV	C.CAPACITOR CH 50V 0.01U	3	
C405-07	ECUMIE104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C408	ECUMIH1032FV	C.CAPACITOR CH 50V 0.01U	1	
C409	ECSTIAB475ZR	T.CAPACITOR 35V 4.7U	1	
C410	ECUMIE104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C411	ECUMIC105ZFN	C.CAPACITOR CH 16V 1U	1	
C412,13	ECUMIE104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C501	ECEA1ASN100	E.CAPACITOR 10V 10U	1	
C504	ECEA1ASN100	E.CAPACITOR 10V 10U	1	
C505,06	ECUMIE4732FN	C.CAPACITOR CH 25V 0.047U	2	
C507	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C510,11	ECUMIH390JCV	C.CAPACITOR CH 50V 39P	2	
C756	ECUMIH390JCV	C.CAPACITOR CH 50V 39P	1	
D301	MA141A	DIODE	1	
D305	MA110	DIODE	1	
D306	MA141WK	DIODE	1	
D307	MA728	DIODE	1	
D308	MA3047-M	DIODE	1	
D309	MA110	DIODE	1	
D310	MA141WA	DIODE	1	
D502	MA728	DIODE	1	
FL301	ELB4D009	FILTER	1	
FL302	VLF0663	FILTER	1	
FL303	ELB4B003	FILTER	1	
FL304	ELB4C011	FILTER	1	
FL307	ELB4D010	FILTER	1	
FL308	ELB4B030	FILTER	1	
FL310	VLF0610	FILTER	1	
FP302	VJS2596	CONNECTOR (FEMALE)	1	
FP306	VJS2137	CONNECTOR	1	
FP310	VJS2116	CONNECTOR (FEMALE)	1	
IC302	MN3817S	IC	1	
IC303	MN3818S	IC	1	
IC304	AN2154FAP	IC	1	
IC308	AN1358S	IC	1	
IC308,09	LM2904M	IC	2	
IC310	AN2254FAP	IC	1	
IC311	MN73512XWA	IC	1	
IC312	VCRW0032	IC	1	
IC314	AN2354S	IC	1	
IC315	UPC311G2-E2	IC	1	
IC503	LM2904M	IC	1	
IC504,05	LM324ML	IC	2	
IC506,07	TC4S66F	IC	2	
		</		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R315	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R317	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R318	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R319	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R321	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R322	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R323	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R324	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R325,26	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R327	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R328	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R329	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R331	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R332	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R333	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R334	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R336	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R338	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R339	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R340	ERJ3GEYJ563	M.RESISTOR CH 1/16W 18K	1	
R341	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R342	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R343	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R344	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R345,46	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R347	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R348	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R349	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R350	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R351	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R352	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R353,54	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R355	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R357	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R358	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R359	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R360	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R361,62	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R363	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R364	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R365	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R366	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R367	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R368	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R369-71	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3	
R372,73	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	2	
R374,75	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R376	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R377	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R378	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R380	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R381	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R382	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R383	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R385	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R387	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R388	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R389	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R390	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R391,92	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R393,94	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R397	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R398	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R399	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R400	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R401	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R402,03	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R404	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R405	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R406	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R408	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R409	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R410	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R411	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R412,13	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R414	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R415	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R416	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R417	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R418,19	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R424	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R426	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R427	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R428	ERJ3GEYJ000	M.RESISTOR CH 1/16W 0.00	1	
R429	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R431	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R434	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R435	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R436	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R437	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R439	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R440	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R442	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R443,44	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R445	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R446	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R447	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R448	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R449	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R450	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R451	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R452	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R456,57	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	2	
R458	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R459	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R460	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R461	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R462	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R465	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R470	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R471	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R481	ERJ3GEYJ390	M.RESISTOR CH 1/16W 39	1	
R482	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R483	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R484	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R486	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R488	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R489	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R491	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R492,93	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R498	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R507	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R509	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R510	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R511	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R513	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R533	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R534-36	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R537	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R538	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R539	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R540,41	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R542	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R543	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R544-53	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	10	
R554,55	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R557	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R558	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R559	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R560	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R561	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R563,64	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	2	
R565	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R569-71	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R573	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R574,75	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2	
R576	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R577,78	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R580,81	ERJ3GEYJ274	M.RESISTOR CH 1/16W 270K	2	
R582	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6801	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6802	ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C6803	ECEA1HK010	E.CAPACITOR 50V 1U	1	
D6802_03	MA165	DIODE	2	
P6801	VJP1610T	CONNECTOR	1	
P6802	VJS2282	CONNECTOR	1	
Q6801	2SB642	TRANSISTOR	1	
R6801	ERDS2TJ393	C.RESISTOR 1/4W 39K	1	
R6802	ERDS2TJ683	C.RESISTOR 1/4W 68K	1	
R6803	ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R6804	ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R6805	ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R6806	ERDS2TJ104	C.RESISTOR 1/4W 100K	1	
SW6801	ESD1111212	SWITCH	1	
SW6802-04	EVQSU04W	SWITCH	3	
VEP30038A	AF/ZOOM DETECT C.B.A.	(NLA)		
ERDS2TJ391	C.RESISTOR 1/4W 390	1		
ON2170	IC	1		
VJP1610T	CONNECTOR (MALE)	1		
FPO01	VJS2582B005	CONNECTOR (FEMALE)	1	
SW001-04	EVQSU04W	SWITCH	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VEP28022A	E.V.F. C.B.A.	(NLA)		
CAPACITORS				
C801	ECUM1E104JFM	C.CAPACITOR CH 25V 0.1U	1	
C802	ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C803	ECUM1H121JCVC	C.CAPACITOR CH 50V 120P	1	
C804	ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C805	ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C806	ECUM1E223KBN	C.CAPACITOR CH 25V 0.023U	1	
C807	ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C808	ECUM1C1052FN	C.CAPACITOR CH 16V 1U	1	
C809	ECEA1AF470	E.CAPACITOR 10V 47U	1	
C810	EQCP1302J2	P.CAPACITOR 100V 3000P	1	
C811	ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C812	ECUM1H101JCVC	C.CAPACITOR CH 50V 100P	1	
C813	VCKO08BK151	C.CAPACITOR	1	
C814	ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C815	VCKO05BK331	C.CAPACITOR 330P	1	
C816	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
MA141K	DIODE	1		
SFPL-52	DIODE	1		
ERA34-10	DIODE	1		
BR1102W	DIODE	1		
AN2514S	IC	1		
VLQ0319K390	COIL 39UH	1		
ELH5L201D	COIL	1		
VJP1599T	CONNECTOR (MALE)	1		
VJP1597T	CONNECTOR (MALE)	1		
VJP1229T	CONNECTOR (MALE)	1		
VJP1596T	CONNECTOR	1		
2SB1218	TRANSISTOR	1		
2SD968A	TRANSISTOR	1		
2SA1532	TRANSISTOR	1		
RESISTORS				
ERJ6ENF3482	M.RESISTOR	1		
ERJ6GEYK3R9	M.RESISTOR CH 1/10W 3.9	1		
ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		
ERJ3GEYK4R7	M.RESISTOR CH 1/16W 4.7	1		
ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		
ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1		
ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		
ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		
ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1		
ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		
ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		
ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		
ERJ3GEYJ242	M.RESISTOR CH 1/16W 2.4K	1		
ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		
ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	3		
VSP0015AO25	IC PROTECTOR	1		
ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1		

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D1006	MA141A	DIODE	1		L4004	VLQEL05F101K	COIL 100UH	1	
D1007	DAP202U	DIODE	1		L6001	VLQ0163K330	COIL 33UH	1	
D1008	MA141K	DIODE	1		L6002	VLQEL04F221K	COIL 200UH	1	
D1009	MA3075H	DIODE	1						
D1011,12	MA736	DIODE	2						
D1013	MA141K	DIODE	1		P1001	VJP1607T	CONNECTOR (MALE)	1	
D2001-04	DA204U	DIODE	4		P1002	VJS2137	CONNECTOR	1	
D2006,07	DAN202U	DIODE	2		P2001	VJS2794	CONNECTOR	1	
D2009	MA141K	DIODE	1		P3501	VJP2237	CONNECTOR (MALE)	1	
D2010	MA141A	DIODE	1		P3502	VJS2792	CONNECTOR	1	
D2011	MA141K	DIODE	1		P3503	VJS2710B018	CONNECTOR	1	
D2013,14	MA141K	DIODE	2		P4001	VJP1607T	CONNECTOR (MALE)	1	
D2020	MA141K	DIODE	1		P4002	VJP1611T	CONNECTOR (MALE)	1	
D3501	DAN202U	DIODE	1		P4003	VJP2262	CONNECTOR (MALE)	1	
D4001	DAN202U	DIODE	1		P4004	VJP2264	CONNECTOR (MALE)	1	
D6001	MA141K	DIODE	1		P6001	VJP2260	CONNECTOR (MALE)	1	
D6004	MA159	DIODE	1		P6002	VJP2262	CONNECTOR (MALE)	1	
D6007	DAP202U	DIODE	1		P6003	VJS2112	CONNECTOR (FEMALE)	1	
D6008,09	DAN202U	DIODE	2		P6004	VJP1409	CONNECTOR (MALE)	1	
D6012	MA141K	DIODE	1		P6005	VJP2272	CONNECTOR (MALE)	1	
D6013,14	DAP202U	DIODE	2		P6009	VJP2271	CONNECTOR (MALE)	1	
D6015	MA141K	DIODE	1		P6012	VJP2276	CONNECTOR (MALE)	1	
D6016	MA141A	DIODE	1						
D6017	DAP202U	DIODE	1						
D6018	DA204U	DIODE	1						
D6020	MA141A	DIODE	1						
D6021	DAP202U	DIODE	1		PR1001	VSFO015A15	FUSE	1	
D6022	MA3056	DIODE	1						
D6024	MA141K	DIODE	1						
D6025	MA141A	DIODE	1						
					Q1001,02	2SB956	TRANSISTOR	2	
					Q1003	FMW1	TRANSISTOR-RESISTOR	1	
					Q1004	2SB956	TRANSISTOR	1	
F1001	VSFO058	FUSE	1		Q1005	2SD2177	TRANSISTOR	1	
					Q1006,07	2SB798	TRANSISTOR	2	
					Q1008	2SD1819	TRANSISTOR	1	
					Q1010,11	2SB956X	TRANSISTOR	2	
IC1001	TL1453CNS	IC	1		Q2001	2SD1819	TRANSISTOR	1	
IC1003	LM2903M	IC	1		Q3502,03	2SB970X	TRANSISTOR	2	
IC1005	LM2904M	IC	1		Q3506	2SB1218	TRANSISTOR	1	
IC2001	MN67461VDQF	IC	1		Q3507	XN4401	TRANSISTOR-TRANSISTOR	1	
IC2002	AN3798NS	IC	1		Q3508	FMS1	TRANSISTOR-RESISTOR	1	
IC2003	MN1551VSSFS	IC	1		Q4001	2SD1820	TRANSISTOR	1	
IC3501	UPD4066BG	IC	1		Q4002	2SB1219	TRANSISTOR	1	
IC4001	UPC2309AGS	IC	1		Q6003	XN4608X	TRANSISTOR-TRANSISTOR	1	
IC6001	UPD75108GK40	IC	1		Q6005-08	2SD1819	TRANSISTOR	4	
IC6002	S8125OHGRD	IC	1		Q6009	2SB1218	TRANSISTOR	1	
IC6003	UPD6145G617A	IC	1						
IC6004	S3500A3	IC	1						
IC6005	M54543ASL	IC	1						
IC6006	MN12821	IC	1		QR1001	XN4111	TRANSISTOR-TRANSISTOR	1	
IC6007	UPD4094BG	IC	1		QR1005	1MD2	TRANSISTOR-RESISTOR	1	
IC6008	LM2903M	IC	1		QR2001	XN4215	TRANSISTOR-TRANSISTOR	1	
					QR2002	GN1L4M	TRANSISTOR-RESISTOR	1	
					QR2003	GA1L4M	TRANSISTOR-RESISTOR	1	
					QR2004,05	GN1F4Z	TRANSISTOR-RESISTOR	2	
J1001	VJJ0165	JACK	1		QR2006	GA1L4Z	TRANSISTOR-RESISTOR	1	
J1002	VJH0582	JACK	1		QR2007	GA1L4M	TRANSISTOR-RESISTOR	1	
					QR3501	FMG1	TRANSISTOR-RESISTOR	1	
					QR3506	GA1L4M	TRANSISTOR-RESISTOR	1	
					QR3507	FMG2	TRANSISTOR-RESISTOR	1	
L1001	ELC06D015	COIL	1		QR3510	FMG2	TRANSISTOR-RESISTOR	1	
L1002	ELC10D007	COIL	1		QR3511	FMG1	TRANSISTOR-RESISTOR	1	
L1003	ELC08D024	COIL	1		QR6001-04	GA1F4Z	TRANSISTOR-RESISTOR	4	
L1004	ELC08D025	COIL 600UH	1		QR6005	GN1L4M	TRANSISTOR-RESISTOR	1	
L1005	ELC06D015	COIL	1		QR6006	GN1A4Z	TRANSISTOR-RESISTOR	1	
L1006	ELC04D002	COIL	1		QR6007	GA1F4Z	TRANSISTOR-RESISTOR	1	
L1007	VLQ0319K101	COIL 100UH	1		QR6008	GA1L4M	TRANSISTOR-RESISTOR	1	
L1008	VLQ0319F221	COIL 220UH	1		QR6009	XN4316	COMBI. PARTS	1	
L1009	ELC04D006	COIL 120UH	1		QR6010,11	GA1F4Z	TRANSISTOR-RESISTOR	2	
L1010	VLQ0319F221	COIL 220UH	1		QR6015	GN1F4M	TRANSISTOR-RESISTOR	1	
L1011	ELC04D002	COIL	1		QR6016	GA1F4M	TRANSISTOR-RESISTOR	1	
L3503	VLQ0319K101	COIL 100UH	1		QR6017	GA1L4L	TRANSISTOR-RESISTOR	1	
L4001	VLQEL05F101K	COIL 100UH	1		QR6022	GA1F4Z	TRANSISTOR-RESISTOR	1	
L4002,03	VLQEL07F153J	COIL 15mH	2		QR6026	GA1F4Z	TRANSISTOR-RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
					R2028	ERJ6QMYJ183	M.RESISTOR CH 1/10W 18K	1	
					R2029	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
					R2030	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
		RESISTORS			R2031	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R1001	VRE0034E393	M.RESISTOR CH 1/10W 39K	1		R2032	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R1002	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R2033	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R1003	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1		R2034	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R1004	ERJ8GCYJ821	M.RESISTOR CH 1/8W 820	1		R2035	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R1005	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1		R2036	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R1006	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1		R2038	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R1007	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R2039	ERJ6QMYJ104	M.RESISTOR CH 1/10W 100K	1	
R1008	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R2041	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R1009	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1		R2042	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1010	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R2043	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1011, 12	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	2		R2046	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R1015	ERJ8GCYJ821	M.RESISTOR CH 1/8W 820	1		R2048	ERJ6QMYJ221	M.RESISTOR CH 1/10W 220	1	
R1017	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1		R2050, 51	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R1019	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1		R2052	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R1020	ERJ8GCYJ681	M.RESISTOR CH 1/8W 680	1		R2053	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R1021	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1		R2054	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R1023	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R2056	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R1024	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1		R2057	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R1025	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1		R2058	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R1026	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R2063	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R1027	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R2070	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R1028	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1		R3503	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R1029, 30	ERJ6QMYJ102	M.RESISTOR CH 1/10W 1K	2		R3504	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R1031	ERJ6QMYJ122	M.RESISTOR CH 1/10W 1.2K	1		R3505	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R1032	ERJ6QMYJ153	M.RESISTOR CH 1/10W 15K	1		R3506-09	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	4	
R1033	ERJ6QMYJ273	M.RESISTOR CH 1/10W 27K	1		R3518	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R1035	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3519-22	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	4	
R1036	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1		R3523	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1037	ERJ8GCYJ330	M.RESISTOR CH 1/8W 33	1		R3524	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R1038	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R3525	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1039	ERJ8GCYJ560	M.RESISTOR CH 1/8W 56	1		R3526	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1040	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R3527	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R1041	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1		R3528	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R1042	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		R3529	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R1043	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1		R3530	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1044, 45	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2		R4001	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R1048	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R4002	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R1049	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R4003	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R1050	ERJ6QMYJ105	M.RESISTOR CH 1/10W 1M	1		R4004	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R1051	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		R4005	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R1052-54	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3		R4006	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R1055	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1		R4007	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R1056	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		R4008	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R1057, 58	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2		R4009	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R1059	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1		R4010	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1060	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1		R4011	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R1062	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1		R4012	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R1064	ERJ6QMYOR00	M.RESISTOR CH 1/10W 0	1		R4013	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R2001, 02	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		R4014	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R2003	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		R4015	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R2004	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1		R4018	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R2005	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1		R4019	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R2006	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R4020	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R2007	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1		R4021	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R2009	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1		R4024, 25	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R2010	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R4026	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R2011	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1		R4030	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R2012	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1		R4033	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R2013	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1		R4034	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R2014	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R4035	ERJ6QMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2015	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1		R4040	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R2016	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1		R4041	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R2017	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R6001	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R2018	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1		R6004	ERJ3GEYJ331	M.RESISTOR CH 1/16W 33K	1	
R2019	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R6006	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2020	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R6007	ERJ6QMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2022	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1		R6008-10	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	3	
R2024	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		R6011, 12	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R2025	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1		R6014	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R2026	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1		R6015	ERJ6QMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2027	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1		R6016	ERJ6QMYJ683	M.RESISTOR CH 1/10W 68K	1	

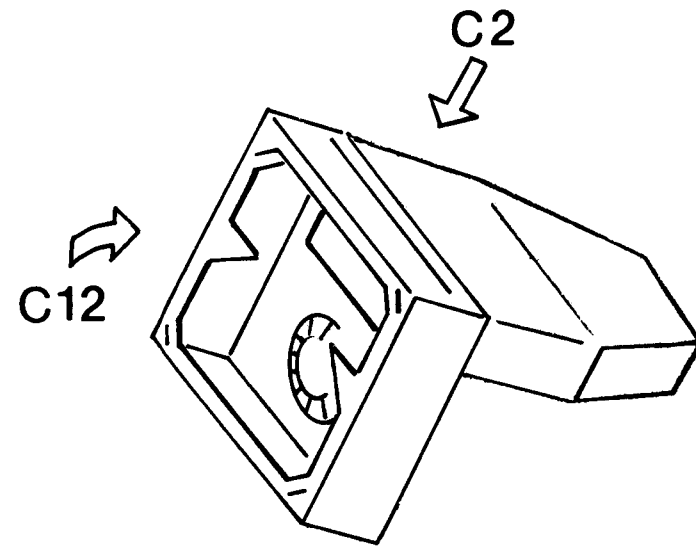
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6018	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1						
R6020	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1						
R6021	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1						
R6022	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1						
R6023	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1		X6001	VSX0387	CRYSTAL OSCILLATOR	1	
R6024	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1		X6002	VSX0249	CRYSTAL OSCILLATOR	1	
R6025	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1						
R6026	ERJ6GMYJ334	M.RESISTOR CH 1/10W 330K	1						
R6027	ERJ6GMYJ823	M.RESISTOR CH 1/10W 82K	1				MISCELLANEOUS		
R6028	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1			VSC2970	BARRIER(TOP)	1	
R6029	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1			VSC2971	BARRIER(MAIN)	1	
R6030, 31	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2			VSC2972	BARRIER(BOTTOM)	1	
R6032	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1			VWJ0399	FLEXIBLE CARD	1	P6003-FP001
R6033	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1			VMX1563	LUMI/CHRO PACK LOCK HINGE	1	
R6034	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1			VMZ1490	POWER BARRIER	1	
R6036	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1			VSC3163	IC SHIELD BARRIER	1	
R6039	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1						
R6040	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1						
R6043	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1						
R6044	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1						
R6045	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1						
R6047	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1						
R6048	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1						
R6049	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1			■ VEPO3676A	LUMINANCE/CHROMINANCE C.B.A	(NLA)	
R6050, 51	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2						
R6052, 53	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2						
R6054	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1						
R6055, 56	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2						
R6058-61	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	4				CAPACITORS		
R6062	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		C3001, 02	ECEA0JSJ151	E.CAPACITOR 6.3V 150U	2	
R6063	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1		C3003	ECEA1CSN4R7	E.CAPACITOR 16V 4.7U	1	
R6064	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		C3004	ECUM1C4732FV	C.CAPACITOR CH 16V 0.047U	1	
R6065, 66	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		C3005	ECEA1CKK100	E.CAPACITOR 16V 10U	1	
R6067	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1		C3006	ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
R6068	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		C3007	ECUM1H121JCV	C.CAPACITOR CH 50V 120P	1	
R6069	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1		C3008	ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
R6070	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		C3009, 10	ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	2	
R6072, 73	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		C3011	ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
R6075	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1		C3012	ECUM1H270JCV	C.CAPACITOR CH 50V 27P	1	
R6076	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		C3013	ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
R6077	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		C3014	ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
R6078	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1		C3015	ECUM1C4732FV	C.CAPACITOR CH 16V 0.047U	1	
R6079	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		C3016	ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
R6080	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1		C3017	ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
R6081	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		C3018	ECUM1H2732FN	C.CAPACITOR CH 50V 0.027U	1	
R6087	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1		C3019	ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
R6088, 89	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2		C3020	ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
R6090	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1		C3021	ECSFICE106	T.CAPACITOR 16V 10U	1	
R6091, 92	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2		C3022, 23	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	2	
R6093	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		C3024	ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
R6097, 98	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		C3025	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
R6099	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1		C3026	ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
R6100, 01	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2		C3027	ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
R6102	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		C3030	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
R6103	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1		C3031	ECEA1CKK100	E.CAPACITOR 16V 10U	1	
R6104	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1		C3032	ECUM1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
					C3033	ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
					C3034	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
					C3035	ECEA1HKK010	E.CAPACITOR 50V 1U	1	
					C3036	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
SW6001, 02	EVQ0FV02K	SWITCH	2		C3037	ECUM1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
					C3038	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
					C3039	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
					C3040	ECEA1CKK100	E.CAPACITOR 16V 10U	1	
T1001	ELL10R014	TRANSFORMER	1		C3041-43	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	3	
T4001	EIQ7QF016Q	TRANSFORMER	1		C3044	ECEA0GKS221	E.CAPACITOR 4V 220U	1	
					C3045	ECEA1HKK010	E.CAPACITOR 50V 1U	1	
					C3046	ECEA1CKK100	E.CAPACITOR 16V 10U	1	
					C3047	ECUM1H391KBN	C.CAPACITOR CH 50V 390P	1	
VR1001	EVM7JSX30B23	V.RESISTOR 2K	1		C3048	ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
VR1002	EVM7JSX30B53	V.RESISTOR 5K	1		C3049	ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
VR1003	EVM7JSX30B52	V.RESISTOR 500	1		C3050	ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
VR2001	EVM7JSX30B15	V.RESISTOR 100K	1		C3051	ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
VR4001	EVM7JSX30B54	V.RESISTOR 50K	1		C3052	ECUM1H100CCV	C.CAPACITOR CH 50V 10P	1	
VR4002	EVM7JSX30B15	V.RESISTOR 100K	1		C3053	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
VR6001	EVM7JSX30B24	V.RESISTOR 20K	1		C3054	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3055	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C3056	ECEAOJKS470	E.CAPACITOR 6.3V 47U	1	
C3057	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C3061	ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3062	ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3065	ECUM1H121JCV	C.CAPACITOR CH 50V 120P	1	
C3066	ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3067	ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C3068	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C3070	ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3071	ECEAOGKS221	E.CAPACITOR 4V 220U	1	
C3072, 73	ECUM1H101JCV	C.CAPACITOR CH 50V 100P	2	
C3074	ECUMIC1042FV	C.CAPACITOR CH 16V 0.1U	1	
C3075, 76	ECUM1H330JCV	C.CAPACITOR CH 50V 33P	2	
C3079	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C8001	ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C8002	ECUM1E2232FV	C.CAPACITOR CH 25V 0.022U	1	
C8004	ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C8005	ECUM1C2242FN	C.CAPACITOR CH 16V 0.22U	1	
C8006-18	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	13	
C8019	ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C8020	ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
C8021	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C8022	ECEA1EKK3R3	E.CAPACITOR 25V 3.3U	1	
C8023, 24	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	2	
C8025	ECEAOJKA101	E.CAPACITOR 6.3V 100U	1	
C8026	ECUM1H030CCV	C.CAPACITOR CH 50V 3P	1	
C8027	ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C8028	ECEAOJSJ151	E.CAPACITOR 6.3V 150U	1	
C8029	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
C8030	ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C8031-35	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	5	
C8036	ECUM1E2242FM	C.CAPACITOR CH 25V 0.22U	1	
C8037	ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C8039	ECEA1AKA330	E.CAPACITOR 10V 33U	1	
C8040	ECUM1H180JCV	C.CAPACITOR CH 50V 18P	1	
C8043	ECUM1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C8045	ECUM1H151JV	C.CAPACITOR CH 50V 150P	1	
C8047, 48	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	2	
C8049	ECEAOJKS220	E.CAPACITOR 6.3V 22U	1	
C8050	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
D3002, 03	MA141K	DIODE	2	
DL8001	VLD0160	DELAY	1	
FL3001	ELB4C014	FILTER	1	
FL3002	VLF0806	FILTER	1	
FL3003	ELB4A020	FILTER	1	
FL8001	ELB4B007	FILTER	1	
FL8002	ELB4B052	FILTER	1	
FL8003	VLF0769	FILTER	1	
FL8008	ELB4B053	FILTER	1	
IC3001	VEFH08B	IC	1	
IC3002	MST001MS	IC	1	
IC3003	AN3580SB	IC	1	
IC3004	TL8808F	IC	1	
IC8001	M52059AFP	IC	1	
L3001, 02	VLQEL05F101K	COIL 100UH	2	
L3003	VLQEL04X470K	COIL 47UH	1	
L3004	VLQEL04X101K	COIL 100UH	1	
L3005	VLQEL04X560K	COIL 56UH	1	
L3007	VLQEL05F101K	COIL 100UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L3008	VLQEL04X101K	COIL 100UH	1	
L3009	VLQEL05F101K	COIL 100UH	1	
L3010	VLQEL04X330K	COIL 33UH	1	
L3011	VLQEL04X151K	COIL 150UH	1	
L3012	VLQEL04X150K	COIL 15UH	1	
L3013	VLQEL05F101K	COIL 100UH	1	
L3015	VLQEL04X390K	COIL 39UH	1	
L3016	VLQEL04X121K	COIL 120UH	1	
L3017	VLQEL04X150K	COIL 15UH	1	
L3020	VLQEL04X560K	COIL 56UH	1	
L8001	VLQEL04X560J	COIL 56UH	1	
L8002	VLQEL04X101K	COIL 100UH	1	
L8003	VLQEL05F331K	COIL 330UH	1	
L8012	VLQEL05F101K	COIL 100UH	1	
L8013	VLQEL04X150K	COIL 15UH	1	
L8015	VLQEL04X121K	COIL 120UH	1	
L8016	VLQEL05F101K	COIL 100UH	1	
L8017	VLQEL04X101K	COIL 100UH	1	
L8018	VLQEL05F101K	COIL 100UH	1	
P3001	VJS2237	CONNECTOR	1	
P3002	VJP2263	CONNECTOR	1	
Q3001	2SD1819	TRANSISTOR	1	
Q3002	2SC3931	TRANSISTOR	1	
Q3003	2SD1819	TRANSISTOR	1	
Q3005, 06	2SD1819	TRANSISTOR	2	
Q3007	2SC3931	TRANSISTOR	1	
Q3008	2SD1819	TRANSISTOR	1	
Q3009	2SD1328	TRANSISTOR CHIP	1	
Q3010	2SD1819	TRANSISTOR	1	
Q3012	2SC3931	TRANSISTOR	1	
Q3013, 14	2SB1218	TRANSISTOR	2	
Q3015	2SC3931	TRANSISTOR	1	
Q3020, 21	2SD1819	TRANSISTOR	2	
QR3001	GA1F4M	TRANSISTOR-RESISTOR	1	
QR3003	GA1F4M	TRANSISTOR-RESISTOR	1	
QR3004	FMG1	TRANSISTOR-RESISTOR	1	
QR3007	GA1L4M	TRANSISTOR-RESISTOR	1	
QR3008	GA1F4M	TRANSISTOR-RESISTOR	1	
QR8001	FMG1	TRANSISTOR-RESISTOR	1	
QR8005	GA1F4M	TRANSISTOR-RESISTOR	1	
QR8006	FMG1	TRANSISTOR-RESISTOR	1	
QR8007	FMG2	TRANSISTOR-RESISTOR	1	
		RESISTORS		
R3002	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3003, 04	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R3005	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3006	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3007	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3008	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3009	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R3010	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3011	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3012	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3013, 14	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R3015	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3016, 17	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3018	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3019	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3020	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3021	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R3022	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R3023, 24	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R3025	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	

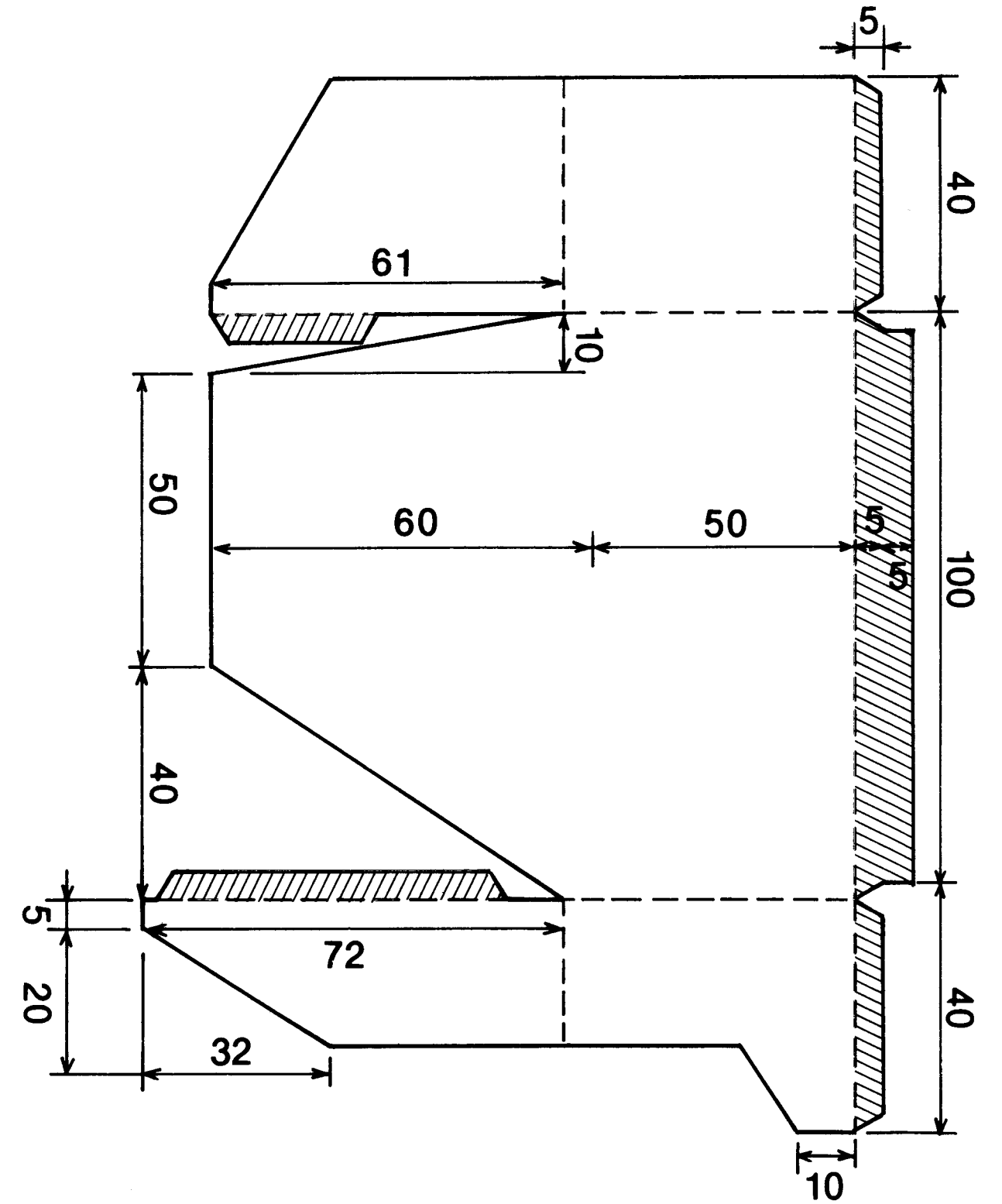
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3026	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R8110	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3027	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1		R8111	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3028	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1		R8112	ERJ6GMVJ333	M.RESISTOR CH 1/10W 33K	1	
R3029	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1		R8113	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3030	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1		R8133	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1	
R3031	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1						
R3032	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1						
R3033	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1						
R3035	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	1		VR3001,02	EVM7JSX30B23	V.RESISTOR 2K	2	
R3036, 37	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2		VR3003	EVM7JSX30B52	V.RESISTOR 500	1	
R3039	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1		VR3004	EVM7JSX30B54	V.RESISTOR 50K	1	
R3040	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		VR8001	EVM7JSX30B13	V.RESISTOR 1K	1	
R3041	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1		VR8007	EVM7JSX30B54	V.RESISTOR 50K	1	
R3042	ERJ6GMVJ122	M.RESISTOR CH 1/10W 1.2K	1						
R3043	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1						
R3044	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1						
R3045, 46	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2						
R3048	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1		X8001	VSX0187	CRYSTAL OSCILLATOR	1	
R3049, 50	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2						
R3051	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1						
R3052	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1						
R3053	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1						
R3054	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1						
R3055	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1						
R3056	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1			VEP02349A	DRIVE C.B.A.		(NLA)
R3057, 58	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2						
R3059	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1						
R3062	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1						
R3063	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1				CAPACITORS		
R3071	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		C2602-04	ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	3	
R3072	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1		C2605,06	ECEA0JKA470	E.CAPACITOR 6.3V 47U	2	
R3073	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		C2607-09	ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	3	
R3074	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		C2610	ECEA1CKS470	E.CAPACITOR 16V 47U	1	
R3075	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1		C2611	ECEA1CKK100	E.CAPACITOR 16V 10U	1	
R3076, 77	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		C2612	ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
R3080	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		C2613-15	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	3	
R3081	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1		C2616	ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
R3082	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1		C2617-19	ECUM1C1042FV	C.CAPACITOR CH 16V 0.1U	3	
R3083	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1		C2620-22	ECUM1C3332FV	C.CAPACITOR CH 16V 0.033U	3	
R3085	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1		C2623	ECUM1H221JV	C.CAPACITOR CH 50V 220P	1	
R3086	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		C2624, 25	ECUM1C1042FV	C.CAPACITOR CH 16V 0.1U	2	
R3087	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		C2626	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
R3088	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		C2627	ECUM1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
R3089	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1		C2628	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
R3090	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1		C2629	ECUM1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
R3091	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		C2630	ECUM1H1032FV	C.CAPACITOR CH 50V 0.01U	1	
R3092	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		C2631	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
R3093	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		C2632	ECEA1CKS470	E.CAPACITOR 16V 47U	1	
R8001-03	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3						
R8004	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1						
R8005	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1						
R8006	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		D2601	MA141K	DIODE	1	
R8008	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1						
R8009	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1						
R8010	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1						
R8011	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		IC2601	BA6456FS	IC	1	
R8012	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		IC2602	AN3819FBS	IC	1	
R8013	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1		IC2603	TIM3700	IC	1	
R8014	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		IC2604,05	ON2170	IC	2	
R8015	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1						
R8017	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1						
R8018	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1						
R8020	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1		P2601	VJP2794	CONNECTOR	1	
R8025, 26	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		P2602	VJS2582B015	CONNECTOR (FEMALE)	1	
R8027	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1		P2603	VJS2325	CONNECTOR	1	
R8028	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		P2604,05	VJP2271	CONNECTOR (MALE)	2	
R8029	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		P2606	VJP2260	CONNECTOR (MALE)	1	
R8100	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1						
R8101	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1						
R8102	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1						
R8103	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0.00	1		Q2601	2SD1819	TRANSISTOR	1	
R8105	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1						
R8106	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1						
R8107,08	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2						
R8109	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1				RESISTORS		

Memo



[ASSEMBLING PROCEDURE]

1. MAKE THE PHOTO-COPY FROM SERVICE MANUAL.
 2. PASTE THE PHOTO-COPY AND THICK PAPER TOGETHER.
 3. CUT-THE "———" LINE.
 4. FOLD THE "———" LINE.
 5. PASTE IT ON THE "|||||" PART AND ASSEMBLE IT AS SHOWN NEAR ILLUSTRATION.
- NOTE: IT IS BETTER TO PAINT THE INSIDE OF FIXTURE BY BLACK COLOUR TO AVOID THE REFLECTION OF LIGHT AND CHANGE OF COLOUR TEMPERATURE.



NOTE: THIS ILLUSTRATION IS DRAWN BY REAL SIZE.

